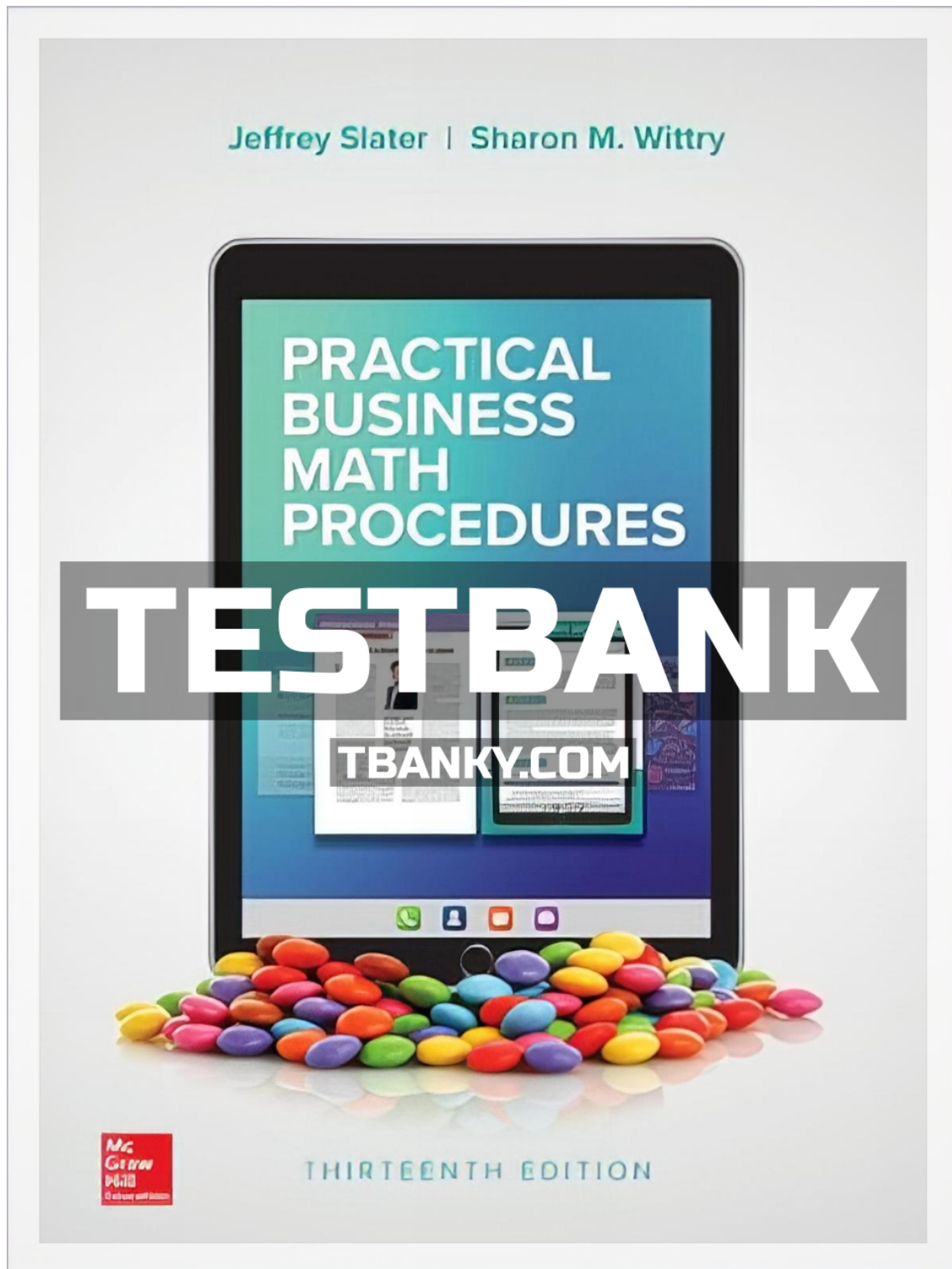


**TEST BANK FOR PRACTICAL BUSINESS
MATH PROCEDURES 13TH EDITION SLATER
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Practical Business Math Procedures, 13e (Slater)
Chapter 2 Fractions

1) A proper fraction is when the numerator is greater than the denominator.

Answer: FALSE

Explanation: A proper fraction is when the numerator is smaller than the denominator.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

2) The writing of a whole number and a proper fraction is an improper fraction.

Answer: FALSE

Explanation: The writing of a whole number and a proper fraction is a mixed number.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

3) $\frac{4}{5}$ is a proper fraction.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

4) When a mixed number is converted to an improper fraction, the new numerator is placed over the old denominator.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

5) The greatest common divisor can be zero.

Answer: FALSE

Explanation: The greatest common divisor cannot be zero.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

6) Inspection as well as the step approach could be used to find the least common denominator.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

7) In the step approach the last divisor used is the greatest common divisor.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

8) Fractions should never be reduced to their lowest terms.

Answer: FALSE

Explanation: Fractions should always be reduced to their lowest terms.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

9) The greatest common divisor and the least common denominator are really the same.

Answer: FALSE

Explanation: The least common multiple and the least common denominator are the same number.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

10) The least common denominator of fractions can be found by observation or by the use of prime numbers.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

11) 4 is a prime number.

Answer: FALSE

Explanation: 4 is a composite number.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

12) 2, 5, 7, 11, and 13 are all examples of prime numbers.

Answer: TRUE

Explanation: Prime numbers contain divisors of 1 and themselves only.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

13) Cancellation is a technique to reduce fractions to the lowest terms.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

14) The reciprocal is not used in dividing fractions.

Answer: FALSE

Explanation: The reciprocal is used in dividing fractions.

Difficulty: 1 Easy

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

15) Reducing a fraction to the lowest terms does not change the fraction's value.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

16) Raising a fraction to higher terms does change the value of the fraction.

Answer: FALSE

Explanation: Raising a fraction to higher terms does not change the value of the fraction.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

17) A mixed number is a whole number and a proper fraction.

Answer: TRUE

Explanation: Review your notes on terminology and vocabulary related to this material.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

18) $1\frac{4}{5}$ is an example of a(n):

- A) Proper fraction
- B) Mixed number
- C) Improper fraction
- D) Complex fraction
- E) None of these

Answer: B

Explanation: Mixed numbers contain a whole number and a proper fraction.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

19) $\frac{13}{2}$ converted to a mixed number is:

- A) $6\frac{1}{6}$
- B) $6\frac{1}{2}$
- C) $6\frac{1}{3}$
- D) $6\frac{3}{4}$
- E) None of these

Answer: B

Explanation: $\frac{13}{2} = 6\text{ R }1$.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

20) The greatest common divisor of 20/30 is:

- A) 2
- B) 5
- C) 1
- D) 10
- E) 3

Answer: D

Explanation: The largest number that goes into both is 10.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

21) The first step in using the step approach to finding the greatest common divisor is to:

- A) Use the observation method
- B) Divide the larger number into the smaller number
- C) Divide the numerator into the denominator
- D) Divide the remainder into the divisor
- E) Subtract the numerator from the denominator

Answer: C

Explanation: The first step in the step approach is to divide the numerator into the denominator.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

22) The first step in converting $30/50 = ?/200$ to higher terms is to:

- A) Multiply 4 times 30
- B) Divide 200 by 50
- C) Divide 50 by 200
- D) Multiply 200 times 30
- E) None of these

Answer: B

Explanation: First take 200 divided by 50.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

23) $4/5 + 6/5$ equals:

- A) $10/5$
- B) $5/1$
- C) 2
- D) 100
- E) None of these

Answer: C

Explanation: $4/5 + 6/5 = 10/5 = 2/1 = 2$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

24) In adding $4/5 + 18/100$ the least common denominator is:

- A) 5
- B) 20
- C) 50
- D) 100
- E) 500

Answer: D

Explanation: Since 5 goes into 100, then 100 is the LCD.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

25) Which of the following is not a prime number?

- A) 5
- B) 11
- C) 19
- D) 24
- E) 2

Answer: D

Explanation: 24 has divisors of 1, 2, 3, 4, 6, 8, 12, and 24.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

26) The LCD of $\frac{6}{20}$, $\frac{9}{5}$, $\frac{7}{50}$, and $\frac{3}{4}$ is:

- A) 5
- B) 4
- C) 20
- D) 50
- E) 100

Answer: E

Explanation: 100 is the smallest number 20, 5, 50, and 4 all go into.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

27) The cancellation method:

- A) Raises fractions to the highest terms
- B) Results in multiplying a number evenly by the numerator and denominator of a fraction or fractions
- C) Has a definite set of rules
- D) Is an alternative method to reducing fractions to the lowest terms
- E) None of these

Answer: D

Explanation: In the cancellation method, reduce the fraction by finding a number that goes into the numerator and the denominator.

Difficulty: 1 Easy

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

28) The reciprocal is used:

- A) In multiplying fractions
- B) To replace the cancellation method
- C) In dividing whole numbers
- D) In dividing fractions
- E) In adding fractions

Answer: D

Explanation: In fraction division, the first step is to multiply by the reciprocal.

Difficulty: 1 Easy

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

29) Which step is not included in the step approach to calculating the greatest common divisor?

- A) Divide small number into larger number
- B) Divide remainder into divisor of last step
- C) Continue dividing remainder into divisor till no remainder exists
- D) Divide larger number into smaller number
- E) None of these

Answer: D

Explanation: Review the steps of this approach.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

30) To find LCD by prime numbers you should:

- A) Take numerators and arrange in a row
- B) Divide numerators by highest prime number
- C) Continue division until no prime number will divide into at least three numbers
- D) Take denominators and arrange in a row
- E) None of these

Answer: D

Explanation: Review steps for finding LCD using this method.

Difficulty: 1 Easy

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

31) A trip to Portland, Oregon, from Boston will take $7\frac{3}{4}$ hours. Assuming we are two-thirds of the way there, how much longer in hours will the trip take?

- A) $\frac{7}{12}$
- B) $1\frac{7}{12}$
- C) $2\frac{7}{12}$
- D) $2\frac{1}{2}$
- E) None of these

Answer: C

Explanation: $7\frac{3}{4} \times \frac{1}{3} = 31/4 \times 1/3 = 31/12 = 2\frac{7}{12}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-02 (3) Subtract like and unlike fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

32) Shelley Tilton bought $1\frac{3}{4}$ lbs of sliced roast beef, $8\frac{1}{2}$ lbs of sliced ham, and $\frac{3}{4}$ lb of coleslaw at Albertson's Market. What was the total weight of her purchases?

- A) 11 lbs
- B) 10 lbs
- C) $9\frac{1}{2}$ lbs
- D) 12 lbs
- E) None of these

Answer: A

Explanation: $1\frac{3}{4} + 8\frac{1}{2} + \frac{3}{4} = 1\frac{3}{4} + 8\frac{2}{4} + \frac{3}{4} = 9\frac{8}{4} = 9 + 2 = 11$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

33) Joe Jackson worked 8 hours on Monday, $4\frac{1}{4}$ hours on Tuesday, $6\frac{1}{8}$ hours on Wednesday, $7\frac{1}{4}$ hours on Thursday, and $8\frac{1}{8}$ hours on Friday. Calculate the total number of hours Joe worked for the week.

- A) 35
- B) $33\frac{1}{8}$
- C) $32\frac{3}{4}$
- D) $33\frac{3}{4}$
- E) None of these

Answer: D

Explanation: $8 + 4\frac{1}{4} + 6\frac{1}{8} + 7\frac{1}{4} + 8\frac{1}{8} = 8 + 4\frac{2}{8} + 6\frac{1}{8} + 7\frac{2}{8} + 8\frac{1}{8} = 33\frac{6}{8} = 33\frac{3}{4}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

34) Cartons of humidifiers are stocked in 25,500 sq. ft. of warehouse space at Home Depot. If each carton requires $4\frac{1}{4}$ sq. ft. of space, how many cartons can be stored in this space?

- A) 60
- B) 600
- C) 6,000
- D) 60,000
- E) 5,100

Answer: C

Explanation: $25,500 / 4\frac{1}{4} = 25,500 / 1\frac{1}{4} = 25,500 / 1 \div \frac{1}{4} = 25,500 / 1 \times \frac{4}{1} = 6,000$

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

35) At a local Subway, Jill Jones owns $\frac{1}{4}$ of the company and Roger Moore owns $\frac{1}{8}$. Bill Moore owns the rest. What part is owned by Bill?

- A) $\frac{1}{4}$
- B) $\frac{1}{8}$
- C) $\frac{3}{8}$
- D) $\frac{5}{8}$
- E) None of these

Answer: D

Explanation: $\frac{1}{4} + \frac{1}{8} = \frac{2}{8} + \frac{1}{8} = \frac{3}{8}$. Thus Bill owns $1 - \frac{3}{8} = \frac{8}{8} - \frac{3}{8} = \frac{5}{8}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (3) Subtract like and unlike fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

36) Matt Kaminsky bought a Volvo that is $3\frac{3}{4}$ times as expensive as the car his parents bought. If his parents paid \$15,000 for theirs, what is the cost of Matt's car?

- A) \$45,000
- B) \$60,000
- C) \$30,000
- D) \$25,000
- E) \$56,250

Answer: E

Explanation: $15,000 \times 3\frac{3}{4} = 15,000/1 \times 15/4 = \$56,250$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

37) The price of a new Apple iPod has increased by $\frac{1}{4}$. If the original price of the Apple was \$200, what is the price today?

- A) \$150
- B) \$250
- C) \$200
- D) \$175
- E) \$300

Answer: B

Explanation: $200 \times \frac{1}{4} = 50$. Thus the new price is $200 + 50 = 250$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

38) The price of a Panasonic 3D flat screen television decreased by $\frac{1}{5}$. If the original price was \$1,500, what is the price today?

- A) \$300
- B) \$1,200
- C) \$1,800
- D) \$1,000
- E) \$1,400

Answer: B

Explanation: $1,500 \times \frac{1}{5} = 300$. Thus the new price is $1,500 - 300 = 1,200$.

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

39) Lisa Wolf has $20 \frac{1}{8}$ days of vacation per year at Walmart. To date she has taken $4 \frac{1}{2}$ days in January, $3 \frac{1}{4}$ days in February, and $4 \frac{1}{8}$ days in March. How much more vacation time is Lisa entitled to?

- A) $9 \frac{1}{4}$
- B) $11 \frac{7}{8}$
- C) $8 \frac{1}{4}$
- D) $8 \frac{1}{2}$
- E) None of these

Answer: C

Explanation: First take $4 \frac{1}{2} + 3 \frac{1}{4} + 4 \frac{1}{8} = 4 \frac{4}{8} + 3 \frac{2}{8} + 4 \frac{1}{8} = 11 \frac{7}{8}$. Then, take $20 \frac{1}{8} - 11 \frac{7}{8}$. Borrow from the 20 to make 19 and add $\frac{8}{8}$ to the fraction. You will have $19 \frac{9}{8} - 11 \frac{7}{8} = 8 \frac{2}{8} = 8 \frac{1}{4}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

40) A machine at Staples photocopies $12 \frac{1}{4}$ pages per minute. If the machine runs 700 minutes, how many pages will be photocopied?

- A) 8,750
- B) 7,850
- C) 5,875
- D) 8,575
- E) 7,500

Answer: D

Explanation: $12 \frac{1}{4} \times 700 = \frac{49}{4} \times 700 = \frac{34,300}{4} = 8,575$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

41) Jeff Jones is paid \$80 per day at his job at J.C. Penney. Jeff became ill on Monday and had to leave after $\frac{2}{5}$ of a day. What did he earn on Monday? (Assume no work, no pay.)

- A) \$32
- B) \$30
- C) \$48
- D) \$16
- E) \$40

Answer: A

Explanation: $80 \times \frac{2}{5} = \frac{160}{5} = \32 .

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

42) The price of a baseball ticket at Yankee Stadium increased by $2\frac{1}{4}$ over the last three years. If the original price of a ticket was \$60, what is the price of the ticket today?

- A) \$195
- B) \$150
- C) \$135
- D) \$153
- E) \$130

Answer: C

Explanation: $60 \times 2\frac{1}{4} = 60 \times \frac{9}{4} = \frac{540}{4} = \135 .

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

43) Alice Hall, who loves to cook, makes an apple cake (serves six) for her family. The recipe calls for $2\frac{1}{2}$ pounds of apples, $2\frac{1}{4}$ cups of flour, $\frac{1}{5}$ cup of margarine, $1\frac{1}{4}$ cups of sugar, and 4 eggs. Since guests are coming, she would like to make this cake so it will serve 24. How many pounds of apples should she use?

- A) 10
- B) 15
- C) $17\frac{1}{2}$
- D) $10\frac{1}{4}$
- E) None of these

Answer: A

Explanation: She will need 4 times the amount of everything to serve 24 people instead of 6. For apples, $2\frac{1}{2} \times 4 = \frac{5}{2} \times \frac{4}{1} = \frac{20}{2} = 10$ pounds.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

44) In a recent local taste contest testing Coke against Pepsi, it was found that $\frac{3}{5}$ of all people surveyed preferred the taste of Coke. If 7,500 people were in the survey, how many chose Pepsi?

- A) 4,500
- B) 5,400
- C) 3,500
- D) 3,000
- E) None of these

Answer: D

Explanation: If $\frac{3}{5}$ chose Coke, then $1 - \frac{3}{5} = \frac{5}{5} - \frac{3}{5} = \frac{2}{5}$ chose Pepsi. Take $\frac{2}{5} \times 7,500 = 15,000/5 = 3,000$

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

45) The price of a \$200,000 home listed by REMAX was reduced by $\frac{1}{20}$. What is the new price?

- A) \$180,000
- B) \$165,000
- C) \$170,000
- D) \$160,000
- E) None of these

Answer: E

Explanation: $200,000 \times \frac{1}{20} = 10,000$; $200,000 - 10,000 = \$190,000$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

46) Mia Wong bought a new Bose radio for \$280. Bill, a friend of Mia's, can afford to pay only $\frac{3}{4}$ as much as Mia. What is the most Bill could pay for the radio?

- A) \$70
- B) \$210
- C) \$200
- D) \$190
- E) None of these

Answer: B

Explanation: $280 \times \frac{3}{4} = 210$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

47) Jane Ring cut a 6-ft. Subway sandwich into $1\frac{1}{2}$ -ft. sandwiches. How many sandwiches can be cut from the 6-ft. sub?

- A) 6
- B) 8
- C) 5
- D) 10
- E) 4

Answer: E

Explanation: $6 \div 1\frac{1}{2} = 6/1 \times 2/3 = 12/3 = 4$ sandwiches.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

48) The price of a Swatch watch increased $1\frac{3}{4}$ times from the price last year. If this year's price is \$175, what was last year's price?

- A) \$75
- B) \$100
- C) \$60
- D) \$90
- E) \$120

Answer: B

Explanation: $175 \div 1\frac{3}{4} = 175/1 \div 7/4 = 175/1 \times 4/7 = 700/7 = \100 .

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

49) An American Airlines trip from Boston to Los Angeles takes $8\frac{1}{2}$ hours. Assuming we are $\frac{1}{4}$ of the way, how long has the trip taken so far?

- A) $1\frac{1}{16}$
- B) $7\frac{7}{16}$
- C) $2\frac{1}{10}$
- D) $6\frac{7}{16}$
- E) $2\frac{1}{8}$

Answer: E

Explanation: $8\frac{1}{2} \times \frac{1}{4} = 17/2 \times \frac{1}{4} = 17/8 = 2\frac{1}{8}$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

50) Mary Cecil buys 3 pizzas for her son's birthday party. Each pizza has 8 servings. Sixteen people eat pizza at the party (assume each has 1 serving). What part of the pizza remains uneaten?

- A) $\frac{1}{3}$
- B) $\frac{1}{4}$
- C) $\frac{2}{3}$
- D) $\frac{3}{4}$
- E) $\frac{4}{5}$

Answer: A

Explanation: $8 \times 3 = 24$ servings. $16/24 =$ fraction of servings eaten. $1 - 16/24 =$ fraction of servings uneaten.

$24/24 - 16/24 = 8/24 = \frac{1}{3}$.

Difficulty: 3 Hard

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

51) The greatest common divisor of 60/216 is:

- A) 2
- B) 12
- C) 10
- D) 5
- E) 6

Answer: B

Explanation: 12 is the largest number that goes into the numerator and the denominator.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

52) The LCD for 3/10, 20/25, and 18/75 is:

- A) 150
- B) 750
- C) 250
- D) 5
- E) 500

Answer: A

Explanation: The smallest number that 10, 25, and 75 all go into is 150.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

- 53) Jordan traveled $\frac{6}{7}$ of an estimated 1,800-mile trip. How many miles remain in her trip?
- A) 154
 - B) 257
 - C) 291
 - D) 400
 - E) 350

Answer: B

Explanation: $\frac{1}{7}$ of her trip remains. $\frac{1}{7} \times 1,800 = 257.14$ miles = 257.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

- 54) The average cost of a ticket to the 2016 World Series Game 1 was \$1200. The average cost in 2017 increased by $\frac{1}{5}$. What was the cost in 2017?
- A) \$1,000
 - B) \$1,400
 - C) \$240
 - D) \$1,440
 - E) None of these

Answer: D

Explanation: $1,200 \times \frac{1}{5} = 240$. $240 + 1,200 = 1,440$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

55) The average number of students for Professor Shannon's finance class was 20. During the fall semester there was an increase of $\frac{3}{5}$ in students. How many students are registered for his class in the fall?

- A) 32
- B) 24
- C) 30
- D) 26
- E) None of these

Answer: A

Explanation: $\frac{3}{5} \times 20/1 = 60/5 = 12$. $12 + 20 = 32$ students.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

Match the following terms with their definitions.

- A) Equivalent to the original but with larger numbers
- B) Numerator is less than denominator
- C) Smallest nonzero whole number all denominators divide into
- D) Bottom part of fraction
- E) Top of fraction
- F) Numerator is equal to or greater than the denominator
- G) A reducing method when multiplying or dividing fractions
- H) Number divisible only by itself and 1
- I) Expresses a part of a whole number
- J) Largest possible number that divides evenly into both parts of fraction
- K) Whole number and a proper fraction
- L) No number (except 1) divides evenly into both parts of fraction
- M) Interchanging denominator and numerator

56) Fraction

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

57) Reciprocal

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

58) Improper fraction

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

59) Cancellation Method

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

60) Proper fraction

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

61) Denominator

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

62) Mixed number

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

63) Prime number

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

64) Greatest common divisor

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

65) Least common denominator

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

66) Numerator

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

67) Lowest terms

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

68) Higher terms

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions; LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-01 (1) Recognize the three types of fractions.; 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.; 02-02 (2) Find the least common denominator by inspection and prime numbers.; 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

Answers: 56) I 57) M 58) F 59) G 60) B 61) D 62) K 63) H 64) J 65) C 66) E 67) L 68) A

69) Indicate type of fraction:

$3\frac{4}{7}$

Answer: Mixed Number

This fraction has both a whole number and a fraction. The fraction cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

70) Indicate type of fraction:
 $\frac{6}{7}$

Answer: Proper fraction

This fraction does not have a whole number and has a numerator that is smaller than the denominator and cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

71) Indicate type of fraction: $\frac{10}{9}$

Answer: Improper fraction

This fraction does not have a whole number but does have a numerator that is larger than the denominator.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

72) Convert to a mixed number: $\frac{89}{6}$

Answer: $14\frac{5}{6}$

6 goes into 89 fourteen times with 5 left over.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

73) Convert to an improper fraction: $14 \frac{1}{8}$

Answer: $113/8$

8 times 14 plus 1 equals 113.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

74) Given $18/66$, A. Find greatest common divisor (use the step approach or the observation method) and B. Convert to lowest terms.

Answer: A. 6; B. $3/11$

A. The largest number that goes into both 18 and 66 is 6. B. Using the step approach, 18 goes evenly into 66 three times to equal 54, leaving a remainder of 12. 12 goes into 18 one time, leaving a remainder of 6. 6 goes into 12 2 times, leaving a remainder of 0. So the last divisor, 6, is the greatest common divisor. Divide $18/66$ by $6/6$ which equals $3/11$ reduced to lowest terms.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

75) Convert to higher terms: $8/9 = 96/?$

Answer: 108

Divide 96 by 8 to get 12. Multiply 9 by 12 to get 108, which is the answer.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

76) Add (reduce to lowest terms): $\frac{6}{15} + \frac{2}{15}$

Answer: $\frac{8}{15}$

Since there are common denominators, you only need to add 6 and 2 to get 8. $\frac{8}{15}$ cannot be reduced further.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

77) Add (Reduce to lowest terms): $\frac{1}{7} + \frac{5}{14}$

Answer: $\frac{7}{14} = \frac{1}{2}$

Multiply $\frac{1}{7}$ by $\frac{2}{2}$ and add the fractions to get $\frac{7}{14}$, which can then be reduced to $\frac{1}{2}$.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures; LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.; 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

78) Find LCD by using prime numbers (show work): $\frac{1}{8} + \frac{1}{4} + \frac{1}{3} + \frac{1}{6}$

Answer: 24

List the denominators in a row, sorted left to right, then break each number down to its prime values by dividing by 2, carrying down any numbers that cannot divide evenly. Once you have used 2 for dividing you will have to use the next prime number which is 3. Multiply the prime numbers ($2 \times 2 \times 3$) times the denominators ($2 \times 1 \times 1 \times 1$) equals 24.

$2 / 8 \ 4 \ 3 \ 6$

$2 / 4 \ 2 \ 3 \ 3$

$3 / 2 \ 1 \ 3 \ 3$

$2 \ 1 \ 1 \ 1$ Take $2 \times 2 \times 3 \times 2 \times 1 \times 1 \times 1 = 24$

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

79) Subtract (reduce to lowest terms if necessary): $13 \frac{1}{7} - 5 \frac{5}{21}$

Answer: $7 \frac{19}{21}$

Convert to Improper Fractions Method: Convert $13 \frac{1}{7}$ and $5 \frac{5}{21}$ to improper fractions, then find the lowest common denominator [21] and subtract. Convert the answer to a mixed fraction.
 $92/7 - 110/21 = 276/21 - 110/21 = 166/21 = 7 \frac{19}{21}$

Borrowing Method: $13 \frac{3}{21} - 5 \frac{5}{21}$. Since 3 is smaller than 5, borrow $\frac{21}{21}$ (which is 1) from the 13, making it a 12. Thus, the problem becomes $12 \left(\frac{3}{21} + \frac{21}{21} \right) - 5 \frac{5}{21}$ which is $12 \frac{24}{21} - 5 \frac{5}{21} = 7 \frac{19}{21}$

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

80) Multiply (cancel as needed): $11 \frac{3}{8} \times 6 \frac{6}{7}$

Answer: 78

Before multiplying, remember to convert the mixed fractions into improper fractions. $91/8 \times 48/7 = 4368/56 = 78$

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.; 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

81) At Louis's grocery, each case of Cheerios takes up $3 \frac{1}{2}$ square feet. If Louis sets aside 6,930 square feet, how many cases of Cheerios can Louis store?

Answer: 1,980

Divide 6,930 by $3 \frac{1}{2}$, which is the same as multiplying 6,930 by $2/7$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

82) On a plane trip to Hawaii, the baggage weight projected was $2,182 \frac{1}{4}$ lbs. The actual weight of all bags totaled $2,095 \frac{1}{3}$ lbs. By how much was the projected weight overstated?

Answer: $86 \frac{11}{12}$ lbs.

After converting the fractions to have 12 as a common denominator, subtract the actual from the projected baggage weight.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

83) Acme Track Incorporated received 360 pairs of Nike running shoes. Each pair sells for \$58. Acme found $\frac{1}{9}$ of the pairs to be defective and returned them. Assuming each pair cost Acme \$26, what profit did Acme make assuming all non-defective sneakers were sold? (profit = sales - cost)

Answer: \$10,240

Find the difference between the sale price and the cost [\$32]. Divide 360 by 9 to get 40 and subtract the 40 pairs of defective shoes from the 360. Take this value of 320 and multiply it by \$32 to get the answer. [This is the same as squaring 32 and attaching a zero!]

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

84) Last year's sales at Mel's Cinema totaled \$144,600. This year's sales should increase by $\frac{1}{3}$. How much should sales increase by, and what will sales be in the new year?

Answer: \$48,200; \$192,800

Multiply the sales total by $\frac{1}{3}$ to get the increase in sales and then add that increase back to the current sales total to get the next year's total.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

85) Indicate type of fraction: $3\frac{3}{4}$

Answer: Mixed number

This fraction has both a whole number and a fraction.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

86) Indicate type of fraction: $\frac{5}{6}$

Answer: Proper fraction

This fraction does not have a whole number and has a numerator that is smaller than the denominator and cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

87) Indicate type of fraction: $\frac{10}{9}$

Answer: Improper fraction

This fraction does not have a whole number but does have a numerator that is larger than the denominator and can be reduced further by dividing the numerator by the denominator equaling 1 and $\frac{1}{9}$. All improper fractions can be reduced to a whole number or a mixed number unless otherwise stated.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

88) Convert to a mixed number: $113/6$

Answer: $18\frac{5}{6}$

6 divides into 113 eighteen times with a remainder of 5.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

89) Convert to an improper fraction: $9\frac{1}{8}$

Answer: $\frac{73}{8}$

9 times 8 plus 1 equals 73. Show the 73 as the new denominator over the 8.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

90) Calculate greatest common divisor by step approach and reduce to lowest terms: 180/440

Answer: $\frac{9}{22}$

Use the step approach to determine that 20 is the greatest common divisor. Divide both the numerator and the denominator by 20 to show the fraction in lowest terms.

$$\begin{array}{ccccc}
 20 & \frac{9}{22} & 180 \overline{) 440} & 80 \overline{) 180} & 20 \overline{) 80} \\
 & & \underline{360} & \underline{160} & \underline{80} \\
 & & 80 & 20 & 0
 \end{array}$$

$$\begin{array}{r}
 180 \div 20 = 9 \\
 440 \div 20 = 22
 \end{array}$$

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

91) Convert to higher terms: 7/19 = ?/114

Answer: 42

Divide 114 by 19 to get 6. Multiply the numerator of 7 by 6 to get 42.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

92) Find LCD by using prime numbers (show work): $\frac{1}{2} + \frac{1}{6} + \frac{1}{8} + \frac{1}{4}$

Answer: 24

Remember to list the denominator in a sorted row before dividing each number by 2 and carrying down those which have remainders.

$$\begin{array}{r|rrrr}
 2 & 2 & 6 & 8 & 4 \\
 \hline
 2 & 1 & 3 & 4 & 2 \\
 \hline
 & 1 & 3 & 2 & 1 \\
 & 2 \times 2 \times 1 \times 3 \times 2 \times 1 = 24
 \end{array}$$

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

93) $\frac{5}{9} \div 5 =$

Answer: $\frac{1}{9}$

Use canceling to reduce the 5's in the numerator and denominator to 1's to get an answer of $\frac{1}{9}$.

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

94) At Flynn Manufacturing, $30 \frac{1}{4}$ rolls of tape are made each hour on a new high-speed machine. If the machine runs 12 hours, how many rolls of tape will be produced?

Answer: 363 rolls of tape

Convert the mixed fraction into an improper fraction and multiply: $\frac{121}{4} \times \frac{12}{1}$ Cancel the 12 and 4 to make a 3 and 1, respectively. The problem becomes: $\frac{121}{1} \times \frac{3}{1} = \frac{363}{1} = 363$

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (2) Use the cancellation method in the multiplication and division of fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

95) At Kentucky Fried Chicken, a survey showed $\frac{2}{3}$ of all people preferred skinless chicken over the regular chicken. If 2,400 people responded to the survey, how many preferred regular chicken?

Answer: 800

$\frac{2}{3}$ preferred skinless, leaving $\frac{1}{3}$ to prefer regular. Multiply 2,400 by $\frac{1}{3}$, which is the same as dividing 2,400 by 3, to get 800 as the answer.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

96) At United Airlines, Pete Roy worked $8 \frac{3}{4}$ hours on Monday, $4 \frac{1}{2}$ hours on Tuesday, $9 \frac{1}{4}$ hours on Wednesday, $10 \frac{1}{2}$ hours on Thursday, and 7 hours on Friday. How many total hours did Pete work during the week?

Answer: 40

Get an LCD for all fractions. Add the whole numbers together and numerators together.

$8 \frac{3}{4} + 4 \frac{2}{4} + 9 \frac{1}{4} + 10 \frac{2}{4} + 7 = 38 \frac{8}{4} = 38 + 2 = 40$ hours.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

97) The Boston Red Sox announced that the price of their \$50 bleacher seats will increase next year by $\frac{1}{5}$. What will be the new ticket price?

Answer: \$60

Stating that the price will increase by $\frac{1}{5}$ means that the next year's price will be $1\frac{1}{5}$ of this year's price. Change this to an improper fraction. Multiply \$50 by $\frac{6}{5}$, and use canceling to a final answer of \$6

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

98) Indicate the type of fraction: $3\frac{1}{8}$

Answer: Mixed number

This fraction has both a whole number and a fraction. The fraction cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

99) Indicate the type of fraction: $\frac{6}{7}$

Answer: Proper fraction

This fraction does not have a whole number and has a numerator that is smaller than the denominator and cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

100) Indicate the type of fraction: $\frac{12}{11}$

Answer: Improper fraction

This fraction does not have a whole number but does have a numerator that is larger than the denominator and can be reduced further by dividing the numerator by the denominator equaling 1 and $\frac{1}{11}$. All improper fractions can be reduced to a whole number or a mixed fraction unless otherwise stated.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

101) Indicate the type of fraction: $\frac{5}{6}$

Answer: Proper fraction

This fraction does not have a whole number and has a numerator that is smaller than the denominator and cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

102) Indicate the type of fraction: $\frac{15}{14}$

Answer: Improper fraction

This fraction does not have a whole number but does have a numerator that is larger than the denominator and can be reduced further by dividing the numerator by the denominator equaling 1 and $\frac{1}{14}$. All improper fractions can be reduced to a whole number or a mixed fraction unless otherwise stated.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

103) Indicate the type of fraction: $12\frac{9}{10}$

Answer: Mixed number

This fraction has both a whole number and a fraction. The fraction cannot be reduced further.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

104) Convert to a mixed number: $\frac{88}{7}$

Answer: $12\frac{4}{7}$

7 goes into 88 twelve times with 4 left over.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

105) Convert to a mixed number: $\frac{77}{3}$

Answer: $25\frac{2}{3}$

25 goes into 77 three times with 2 left over.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

106) Convert to an improper fraction: $12\frac{1}{7}$

Answer: $\frac{85}{7}$

12 times 7 plus 1 equals 85. Show 85 over 7 as the final answer.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

107) Given 90/320, A. Find greatest common divisor (use the step approach or the observation method) and B. Convert to lowest terms.

Answer: A. 10 B. 9/32

Using the observation method, 10 is the GCF, since both numbers end in a zero. When 10 is dividing, no other number goes into the numerator and the denominator. Dividing both by 10 gives the reduced fraction 9/32.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

108) Convert to an improper fraction: $11\frac{1}{9}$

Answer: $\frac{100}{9}$

9 times 11 plus 1 equals 100. Show 100 over 9 as the final answer and leave as an improper fraction.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

109) Given $12/96$, A. Find greatest common divisor (use the step approach or the observation method) and B. Convert to lowest terms.

Answer: A. 12 B. $1/8$

Using the step approach, 12 is the greatest common divisor. Dividing $12/96$ by 12 equals $1/8$, which cannot be reduced further.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

110) $8/9 = 72/?$

Answer: $\frac{72}{81}$

Divide the numerator 72 by the other numerator, 8; this equals 9. Multiply the denominator 9 by 9 to get the missing denominator of 81.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

111) $3/4 = 36/?$

Answer: $\frac{36}{48}$

Divide the numerator 36 by the other numerator, 3, to get 12. Multiply the denominator 4 by 12 to get the missing denominator 48.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

112) Add (reduce to lowest terms): $\frac{4}{15} + \frac{1}{15}$

Answer: $\frac{1}{3}$

Adding the fractions $\frac{4}{15}$ and $\frac{1}{15}$ equals $\frac{5}{15}$. This can be reduced to $\frac{1}{3}$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

113) Add (reduce to lowest terms): $\frac{2}{7} + \frac{3}{14}$

Answer: $\frac{1}{2}$

Using 14 as the common denominator multiply $\frac{2}{7}$ times 2 to get $\frac{4}{14}$. Add this to $\frac{3}{14}$ to get a final answer of $\frac{7}{14}$, which can be reduced to $\frac{1}{2}$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

114) Add (reduce to lowest terms): $\frac{3}{7} + \frac{1}{21}$

Answer: $\frac{10}{21}$

Multiply $\frac{3}{7}$ by $\frac{3}{3}$ to get to a common denominator fraction of $\frac{9}{21}$. Add this to $\frac{1}{21}$ to get a final answer of $\frac{10}{21}$, which cannot be reduced further.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

115) Add (reduce to lowest terms): $\frac{4}{7} + \frac{13}{14}$

Answer: $1 \frac{1}{2}$

Multiply $\frac{4}{7}$ by $\frac{2}{2}$ to get a common denominator fraction of $\frac{8}{14}$. Add this to $\frac{13}{14}$ to get $\frac{21}{14}$, which can be converted to a mixed fraction of $1 \frac{7}{14}$, or $1 \frac{1}{2}$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

116) Find LCD by using prime numbers (show work): $\frac{1}{2} + \frac{1}{5} + \frac{1}{4} + \frac{1}{20}$

Answer: 20

Remember to list the denominator in a sorted row before dividing each number by 2 and carrying down those which have remainders.

2	2	5	4	20	

2	1	5	2	10	

5	1	5	1	5	$2 \times 2 \times 5 = 20$
	1	1	1	1	

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

117) Find LCD by using prime numbers (show work): $\frac{1}{3} + \frac{1}{4} + \frac{1}{6} + \frac{1}{8}$

Answer: 24

Remember to list the denominator in a sorted row before dividing each number by 2 and carrying down those which have remainders.

24	2		3	4	6	8
	2		3	2	3	4
	3		3	1	3	2
			1	1	1	2

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (2) Find the least common denominator by inspection and prime numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

118) Subtract (reduce to lowest terms if necessary): $12\frac{1}{8} - 9\frac{2}{3}$

Answer: $2\frac{11}{24}$

Find a LCD of 24. Write equivalent fractions. You will get: $12\frac{3}{24} - 9\frac{16}{24}$. Since 3 is less than 16, borrow 1, written as $\frac{24}{24}$, from the 12. Add $\frac{24}{24}$ to the fraction $\frac{3}{24}$. You will get: $11\frac{27}{24} - 9\frac{16}{24}$. Subtract the whole numbers and the fractions. You will get: $2\frac{11}{24}$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add or subtract mixed numbers with the same or different denominators.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

119) Subtract (reduce to lowest terms if necessary): $14\frac{1}{4} - 3\frac{3}{4}$

Answer: $10\frac{1}{2}$

Before you can subtract you have to make $\frac{1}{4}$ larger than $\frac{3}{4}$, so move one unit [$\frac{4}{4}$] from the whole number to the fraction in the minuend [the larger fraction on top] to get $13\frac{5}{4}$. Now subtract the $3\frac{3}{4}$ to get $10\frac{2}{4}$, which can be reduced to $10\frac{1}{2}$.

Difficulty: 2 Medium

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add or subtract mixed numbers with the same or different denominators.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

120) Multiply (cancel as needed and express final answer as a mixed number): $12\frac{3}{8} \cdot 7\frac{1}{6}$

Answer: $88\frac{11}{16}$

Convert both mixed fractions to improper fractions before using canceling to multiply. Then you'll get $\frac{33}{8}$ times $\frac{43}{2}$, which equals $\frac{1419}{16}$ as an improper fraction. Take 16 divided into 1419 to get 88 with a remainder of 11, to convert this to a mixed number.

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

121) Louis Carroll worked $8\frac{1}{2}$ hours on Monday, $2\frac{3}{4}$ hours on Tuesday, $7\frac{1}{2}$ hours on Wednesday, $7\frac{1}{4}$ hours on Thursday, and 8 hours on Friday. Calculate the total number of hours John worked for the week.

Answer: 34 hours

Add the four fraction values to get the total time worked, first converting the $\frac{1}{2}$'s to fourths.

Add the total time worked. $8\frac{2}{4} + 2\frac{3}{4} + 7\frac{2}{4} + 7\frac{1}{4} + 8 = 32\frac{8}{4} = 32 + 2 = 34$ hours.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

122) Al, Ronda, and Rony enter into a partnership. Al owns $\frac{1}{4}$ of the company, and Ronda owns $\frac{1}{8}$. Calculate the part that is owned by Rony.

Answer: $\frac{5}{8}$

Convert $\frac{1}{4}$ to eighths. Add the fractions together to get $\frac{3}{8}$ and subtract that from 1 to get the remaining partnership of $\frac{5}{8}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (1) Add like and unlike fractions.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

123) Hilton Hotels announced a price decrease of $\frac{1}{10}$ from its \$290 weekend package. What is the new weekend package rate?

Answer: \$261

Since you are trying to find the new rate after the decrease, multiply \$290 by $\frac{9}{10}$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

124) Bill Murray has $16\frac{3}{4}$ days of vacation per year. To date, he has taken $1\frac{3}{4}$ days in January, $4\frac{2}{3}$ days in February, and $2\frac{1}{6}$ days in March. How much more vacation time is Bill entitled to?

Answer: $8\frac{1}{6}$ days

After converting the fractions to have a common denominator, which is 12, add the values. You will get the following: $1\frac{9}{12} + 4\frac{8}{12} + 2\frac{2}{12} = 7\frac{19}{12} = 7 + 1\frac{7}{12} = 8\frac{7}{12}$. Then, subtract this number from the total vacation allowed per year, which is $16\frac{3}{4} - 8\frac{7}{12} = 16\frac{9}{12} - 8\frac{7}{12} = 8\frac{2}{12} = 8\frac{1}{6}$.

Difficulty: 3 Hard

Topic: LU 02-02 Adding and Subtracting Fractions

Learning Objective: 02-02 (4) Add and subtract mixed numbers with the same or different denominators.

Bloom's: Analyze

Type: Static

Accessibility: Keyboard Navigation

125) A trip to New York from Boston will take $4\frac{1}{2}$ hours. Assuming we are two-thirds of the way there, how much longer will the trip take?

Answer: $1\frac{1}{2}$ hours

Since you are trying to find the amount of time left to travel, multiply $4\frac{1}{2}$ by $\frac{1}{3}$ instead of $\frac{2}{3}$ to get the answer. Convert $4\frac{1}{2}$ to the improper fraction $\frac{9}{2}$ first.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

126) The price of a new car increased by $\frac{2}{3}$ over the last five years. If the original price of the car was \$12,000, what is the price today?

Answer: \$20,000

The new car price is the original price plus the increase, so multiply the \$12,000 by $1\frac{2}{3}$, not just $\frac{2}{3}$, to get the final new total price of \$20,000.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

127) Mel Corp. produces $18\frac{1}{4}$ widgets each hour. If the machine runs 16 hours, how many widgets will be produced?

Answer: 292

Convert the $18\frac{1}{4}$ into the improper fraction $\frac{73}{4}$ before multiplying by 16 to get a final answer of 292.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

128) Cans of soup are stocked in 1,250 sq. ft. of warehouse space. If each can requires $2\frac{1}{2}$ sq. ft. of space, how many cans of soup can be stored in this space?

Answer: 500 cans

Convert the $2\frac{1}{2}$ into the improper fraction $\frac{5}{2}$ before dividing the total square footage 1,250 by $\frac{5}{2}$. This is the same as multiplying $\frac{2}{5}$.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

129) John Rone bought a home that is $2\frac{1}{2}$ times as expensive as the home his parents bought. If his parents paid \$80,000 for theirs, what is the cost of John's home?

Answer: \$200,000

Convert the $2\frac{1}{2}$ into the improper fraction $\frac{5}{2}$ and then multiply by the parents' home price of \$80,000.

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

130) In a recent taste testing survey, it was found that $\frac{5}{7}$ of all people surveyed preferred the taste of "A" chicken over "B" chicken. If 3,500 people were in the survey, how many favored "A"? How many favored "B"?

Answer: A. 2,500; B. 1,000

Multiply the number of people surveyed by $\frac{5}{7}$ and then by $\frac{2}{7}$ to get 2,500 and 1,000, respectively. This is a way to check the answer as the two answers should add back up to 3,500.

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

131) Convert to an improper fraction: $16\frac{3}{8}$

Answer: $\frac{131}{8}$

$$16 \times 8 = 128; 128 + 3 = 131/8$$

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (2) Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation

132) Indicate what type of fraction: $12\frac{4}{7}$

Answer: Mixed number

The mixed fraction contains a whole number and a proper fraction.

Difficulty: 1 Easy

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (1) Recognize the three types of fractions

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

133) Complete: $10\frac{1}{8}$ divided by $\frac{1}{8}$

Answer: 27

$$10\frac{1}{8} = \frac{81}{8} \div \frac{1}{8} = \frac{81}{8} \cdot \frac{8}{1} = \frac{81}{1} = 27$$

Difficulty: 2 Medium

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Remember

Type: Static

Accessibility: Keyboard Navigation

134) At Truman Middle School, $\frac{2}{3}$ of the girls surveyed preferred playing capture the flag at gym. If 600 girls responded to the survey, how many preferred playing something else?

Answer: 200

Multiply the 600 respondents times $\frac{1}{3}$ (i.e. divide 600 by 3).

Difficulty: 3 Hard

Topic: LU 02-03 Multiplying and Dividing Fractions

Learning Objective: 02-03 (1) Multiply and divide proper fractions and mixed numbers.

Bloom's: Apply

Type: Static

Accessibility: Keyboard Navigation

135) Reduce the following to the lowest terms: $\frac{162}{567}$

Answer: $\frac{2}{7}$

Use the step approach to divide the smaller number (numerator) of the fraction into the larger number (denominator). The greatest common divisor is 81. Divide both the numerator and the denominator by 81, to get $\frac{2}{7}$.

Difficulty: 2 Medium

Topic: LU 02-01 Types of Fractions and Conversion Procedures

Learning Objective: 02-01 (3) Convert fractions to lowest and highest terms.

Bloom's: Understand

Type: Static

Accessibility: Keyboard Navigation