

1.1 | SECTION PRACTICE

Name _____ Date _____

Find the value of the expression. Check your answer using estimation.

1. $986 + 1545$

2. $2847 + 2136$

3.
$$\begin{array}{r} 4767 \\ + 1309 \\ \hline \end{array}$$

4. $8903 - 4621$

5.
$$\begin{array}{r} 3928 \\ - 1564 \\ \hline \end{array}$$

6. $7612 - 5420$

7. 75×21

8.
$$\begin{array}{r} 316 \\ \times 24 \\ \hline \end{array}$$

9. 394×215

10.
$$\frac{414}{23}$$

11. $546 \div 78$

12. $3780 \div 126$

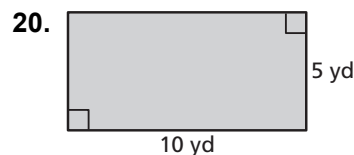
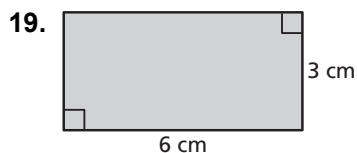
13. $5413 \div 16$

14.
$$\frac{7954}{181}$$

15. $40,785 \div 145$

Determine the operation you would use to solve the problem. Do not answer the question.

16. The box office sold a total of 1762 tickets. There were 241 balcony seat tickets sold. How many regular seat tickets were sold?
17. The warehouse has 14 aisles. Each aisle has 36 shelves. How many shelves does the warehouse have?
18. The orange grove produced 892 crates of oranges. Each train car holds 112 crates. What is the minimum number of train cars they will need?

Find the perimeter and area of the rectangle.

21. Without calculating, decide which is greater: 335×12 or 320×17 . Explain.
22. There are 143 guests coming to a wedding. There are 15 tables in the reception hall. If the tables have approximately the same number of guests, what is the minimum number of guests at each table?

1.2 | SECTION PRACTICE

Name _____ Date _____

Write the product as a power.

1. 6×6

2. $8 \times 8 \times 8$

3. $3 \times 3 \times 3 \times 3$

4. $12 \bullet 12$

5. $4 \times 4 \times 4 \times 4$

6. $10 \bullet 10 \bullet 10 \bullet 10 \bullet 10$

7. Describe and correct the error in writing the value of the product.

$\times$	$2 \times 2 \times 2 \times 2 = 4^2$
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Find the value of the power.

8. 9^2

9. 3^4

10. 7^3

11. The amount of money in your savings account is
- 4×10^3
- . How much money is in your account?

Determine whether the number is a perfect square.

12. 9

13. 12

14. 50

15. 64

16. 100

17. 34

18. Write two perfect squares that each have a value greater than 100 and less than 200.

19. Copy and complete the table. Then describe how to write any power of 1 without multiplying.

Power	1^1	1^2	1^3	1^4	1^5
Value	1	1			

20. The following items are in the shape of a square. How many squares are in each row?

a. A waffle has 16 squares.

b. A magic square has 49 squares.

c. A tile game has 100 squares.

21. Bob has three pennies. Betty has three times as many pennies as Bob. Bill has three times as many pennies as Betty. Barb has three times as many pennies as Bill. Write a power to represent the number of pennies that Barb has.

1.3 | SECTION PRACTICE

Name _____ Date _____

Find the value of the expression.

1. $2 \times (5 - 3)$

2. $16 - (4 \times 3)$

3. $27 \div (3 + 6)$

Evaluate the expression.

4. $15 - 4 \times 3$

5. $5 + (2 + 1)^3$

6. $7 + 4 \times 2^3$

7. $30 \div 6 \times 2$

8. $4 + 6^2 \div 12$

9. $13 - (28 - 4^2)$

10. Describe and correct the error in evaluating the expression.

$\times \quad 56 \div 4 \times 2 = 56 \div 8 = 7$

11. For a math project, you need to complete 4 math worksheets in 5 days. Each worksheet contains 15 problems. Evaluate the expression $4 \times 15 \div 5$ to find how many problems you need to complete each day.

Evaluate the expression.

12. $(49 - 5^2) \div 2^3$

13. $7^2 - 5(10 - 3^2)$

14. $\left(\frac{5}{2} - \frac{3}{2}\right)^3 \times 16$

15. $33 - 6\left(1\frac{1}{3} + \frac{2}{3}\right)$

16. $18 - 5(4.7 - 1.7)$

17. $12(1.4 + 3.6) - 24 \div 3$

18. You have 8 dimes and 13 nickels. How many cents do you have?
19. Use all four operations without parentheses to write an expression that has a value of 1.
20. A family buys 3 dinners at \$9 each, 2 kid's meals at \$4 each, and 4 desserts at \$3 each. After using a \$10 off coupon, how much do they owe before sales tax? Explain how you solved the problem.
21. Four family members are going on an airplane trip together. They are parking a car at the airport terminal. The daily rate for parking a car is \$17 per car. The cars will be parked for 6 days. What is the total cost per family member? Explain how you solved the problem.

1.4 | SECTION PRACTICE

Name _____ Date _____

Use divisibility rules to determine whether the number is divisible by 2, 3, 5, 6, 9, and 10. Use calculator to check your answers.

1. 1200

2. 1515

3. 1071

4. A baseball camp is held at a complex that has 6 baseball diamonds. The coaches would like each diamond to have the same number of campers. Use divisibility rules to determine whether this is possible if 152 kids show up for the camp.

List the factor pairs of the number.

5. 14

6. 26

7. 51

8. 18

9. 36

10. 47

Write the prime factorization of the number.

11. 9

12. 49

13. 28

14. 50

15. 66

16. 38

Find the number represented by the prime factorization.

17. $2^2 \cdot 5^2 \cdot 7$ 18. $2^2 \cdot 3^2 \cdot 11$

Write the prime factorization of the number.

19. 144

20. 243

21. 475

22. A teacher divides the students into three groups for a project. Each group has the same number of students. Is the total number of students *prime* or *composite*? Explain.
23. The glee club has 120 cupcakes to sell. They have decided to arrange the cupcakes in the shape of a rectangle, such that the rows have an even number of cupcakes and the columns have an odd number of cupcakes. How many arrangements of cupcakes can they create? Explain.
24. Find composite numbers that have the following characteristics:
- a. A number greater than 40 whose prime factorization contains 3 prime numbers that do not repeat.
 - b. A number greater than 1000 whose prime factorization contains 1 prime number that does not repeat, 1 prime number that repeats 3 times, and 1 prime number that repeats twice.

1.5 | SECTION PRACTICE

Name _____ Date _____

Use a Venn diagram to find the greatest common factor of the numbers.

1. 10, 35

2. 18, 42

3. 48, 120

Find the GCF of the numbers using lists of factors.

4. 8, 12

5. 22, 121

6. 50, 90

7. 34, 119

8. 32, 45

9. 18, 42

Find the GCF of the numbers using prime factorizations.

10. 36, 60

11. 45, 75

12. 54, 126

13. 78, 117

14. 42, 63

15. 53, 86

16. A high school swim team has 12 new female swimmers and 30 returning female swimmers. Each practice team must have the same number of new and returning female swimmers.

- What is the greatest number of practice teams the coach can make using every swimmer?
- How many new and returning female students will be on each practice team?

Find the GCF of the numbers.

17. 27, 45, 63

18. 20, 36, 72

19. 24, 40, 64

20. Write a set of three numbers that have a GCF of 13.

Tell whether the statement is *always*, *sometimes*, or *never* true.

21. The GCF of two numbers is a composite number.

22. The GCF of two numbers is equal to the lesser of the numbers.

23. You have three numbers.

- Two of the numbers are 24 and 42. What is the GCF of these two numbers?
- The third number is greater than 42 and does not change the GCF. What is one possibility for the third number?

1.6 | SECTION PRACTICE

Name _____ Date _____

Use a Venn diagram to find the least common multiple of the numbers.

1. 2, 3

2. 4, 10

3. 6, 9

Find the LCM of the numbers using lists of multiples.

4. 3, 5

5. 7, 8

6. 4, 6

7. 2, 7

8. 14, 21

9. 16, 24

Find the LCM of the numbers using prime factorizations.

10. 10, 12

11. 18, 30

12. 26, 39

13. 32, 48

14. 25, 40

15. 21, 56

16. Describe and correct the error in finding the LCM.

$\times$	$10 = 2 \cdot 5$
	$15 = 3 \cdot 5$
	$\text{LCM} = 5$

17. You have piano lessons every 7 days and tuba lessons every 3 days. Today you have both lessons.

- In how many days will you have both lessons on the same day again?
- Not counting today or the day when you have the same lesson again, how many piano lessons will you have in between? How many tuba lessons will you have in between?

Find the LCM of the numbers.

18. 3, 5, 7

19. 2, 3, 11

20. 6, 8, 12

21. The snooze button on your alarm clock activates the alarm every 5 minutes. The snooze button on your cell phone activates the alarm every 7 minutes. Both alarms activate at 7:00 A.M. You hit each snooze button as each alarm activates. At what time are both alarms activated again?