

LESSON
1-6

Practice B
Patterns and Sequences

Identify a pattern in each arithmetic sequence and then find the missing terms.

1. 4, 8, 16, 32, __, __, __, ...

2. 100, 95, 90, 85, __, __, __, ...

3. 8, 20, 32, 44, __, __, __, ...

4. 6, 12, 18, 24, __, __, __, ...

Identify a pattern in each sequence. Name the missing terms.

5.

Position	1	2	3	4	5	6	7
Value of Term	5	10	20	40			

6. 300, 250, __, __, 100, __, 0, ...

7. 1, 15, __, 43, 57, __, 85, 99, ...

8. 7, __, 21, 28, __, __, __, 56, ...

9. 9, __, 13, __, __, __, 21, 23, ...

10.

Position	1	2	3	4	5	6	7
Value of Term	3	12	21	30			

11. A forest ranger in Australia took measurements of a eucalyptus tree for the past 3 weeks. The tree was 12 inches tall the first week, 19 inches the second week, and 26 inches the third week. If this growth pattern continues, how tall will the tree be next week?

12. Marla puts the same amount of money in her savings account each month. She had \$450 in the account in April, \$600 in May, and \$750 in June. If she continues her savings pattern, how much money will she have in the account in July?

LESSON
2-1

Practice B

Variables and Expressions

Evaluate each expression to find the missing values in the tables.

1.

n	$n + 8^2$
7	71
9	
22	
35	

2.

n	$25 - n$
20	5
5	
18	
9	

3.

n	$n \cdot 7$
8	56
9	
11	
12	

4.

n	$24 \div n$
2	12
6	
4	
8	

5.

n	$n + 15$
35	
5	
20	
85	

6.

n	$n \cdot 2^3$
7	
4	
10	
13	

7. A car is traveling at a speed of 55 miles per hour. You want to write an algebraic expression to show how far the car will travel in a certain number of hours. What will be your constant? your variable?

8. Shawn evaluated the algebraic expression $x \div 4$ for $x = 12$ and gave an answer of 8. What was his error? What is the correct answer?

Practice B

Translating Between Tables and Expressions

Write an expression for the missing value in each table.

1.

Bicycles	Wheels
1	2
2	4
3	6
b	

3.

Minutes	Hours
60	1
120	2
180	3
m	

2.

Mia's Age	Ryan's Age
7	14
9	16
11	18
r	

4.

Potatoes	Bags
21	3
28	4
35	5
	b

Write an expression for the sequence in each table.

5.

Position	Value of Term
1	3
2	4
3	5
4	6
5	7
n	

6.

Position	Value of Term
1	5
2	9
3	13
4	17
5	21
n	

7. A rectangle has a width of 6 inches. The table shows the area of the rectangle for different widths. Write an expression that can be used to find the area of the rectangle when its length is l inches.

Width (in.)	Length (in.)	Area (in. ²)
6	8	48
6	10	60
6	12	72
6	l	

LESSON
2-6
Practice B
Subtraction Equations

Solve each equation. Check your answers.

1. $s - 8 = 12$

2. $v - 11 = 7$

3. $9 = q - 5$

4. $m - 21 = 5$

5. $34 = x - 12$

6. $n - 45 = 45$

7. $t - 19 = 9$

8. $p - 6 = 27$

9. $15 = v - 68$

Solve each equation. Check your answers.

10. $7 = m - 5$

11. $r - 10 = 22$

12. $16 = x - 4$

13. $40 = p - 11$

14. $28 = d - 6$

15. $n - 9 = 42$

16. $q - 85 = 8$

17. $f - 13 = 18$

18. $47 = w - 38$

19. Ted took 17 pictures at the aquarium. He now has 7 pictures left on the roll. Write and solve a subtraction equation to find out how many photos Ted had when he went to the aquarium.

20. Ted bought a dolphin poster for \$12. He now has \$5. Write and solve a subtraction equation to find out how much money Ted took to the aquarium.

LESSON
2-7

Practice B

Multiplication Equations

Solve each equation. Check your answers.

1. $8s = 72$

2. $4v = 28$

3. $27 = 9q$

4. $12m = 60$

5. $48 = 6x$

6. $7n = 63$

7. $10t = 130$

8. $15p = 450$

9. $84 = 6v$

Solve each equation. Check your answers.

10. $49 = 7m$

11. $20r = 80$

12. $64 = 8x$

13. $36 = 4p$

14. $147 = 7d$

15. $11n = 110$

16. $12q = 144$

17. $25f = 125$

18. $128 = 16w$

19. A hot-air balloon flew at 10 miles per hour. Using the variable h , write and solve a multiplication equation to find how many hours the balloon traveled if it covered a distance of 70 miles.

20. A passenger helicopter can travel 300 miles in the same time it takes a hot-air balloon to travel 20 miles. Using the variable s , write and solve a multiplication equation to find how many times faster the helicopter can travel than the hot air balloon.

LESSON
2-8
Practice B
Division Equations

Solve each equation. Check your answers.

1. $\frac{s}{6} = 7$

2. $\frac{v}{5} = 9$

3. $12 = \frac{q}{7}$

4. $\frac{m}{2} = 16$

5. $26 = \frac{x}{3}$

6. $\frac{n}{8} = 4$

7. $\frac{t}{11} = 11$

8. $\frac{p}{7} = 10$

9. $7 = \frac{v}{8}$

Solve each equation. Check your answers.

10. $10 = \frac{m}{9}$

11. $\frac{r}{5} = 8$

12. $11 = \frac{x}{7}$

13. $9 = \frac{p}{12}$

14. $15 = \frac{d}{5}$

15. $\frac{n}{4} = 28$

16. $\frac{q}{2} = 134$

17. $\frac{u}{16} = 1$

18. $2 = \frac{w}{25}$

19. All the seats in the theater are divided into 6 groups. There are 35 seats in each group. Using the variable s , write and solve a division equation to find how many seats there are in the theater.

20. There are 16 ounces in one pound. A box of nails weighs 4 pounds. Using the variable w , write and solve a division equation to find how many ounces the box weighs.

LESSON
3-4

Practice B
Scientific Notation

Find each product.

1. $345 \cdot 100$

2. $65.2 \cdot 100$

3. $1.84 \cdot 1,000$

Write each number in scientific notation.

4. 16,700

5. 4,680

6. 58,340,000

Write each number in standard form.

7. $3.25 \cdot 10^4$

8. $7.08 \cdot 10^6$

9. $1.209 \cdot 10^7$

10. $6.8 \cdot 10^8$

11. $0.51 \cdot 10^5$

12. $0.006 \cdot 10^3$

Identify the answer choice that is *not* equal to the given number.

13. 356,000

A $300,000 + 56,000$

B $3.56 \cdot 10^5$

C $3.56 \cdot 10^4$

15. 1,659,000

A $1,600,000 + 59,000$

B $1.659 \cdot 10^6$

C $16.59 \cdot 10^6$

17. In 2000, the population of Pennsylvania was 12,281,054. Round this figure to the nearest hundred thousand. Then write that number in scientific notation.

14. $1.28 \cdot 10^6$

A $100,000 + 28,000$

B 1,280,000

C $12.8 \cdot 10^5$

16. $0.074 \cdot 10^3$

A $70.0 + 4.0$

B $7.4 \cdot 10^5$

C $7.4 \cdot 10^1$

18. In 2000, the population of North Carolina was about $8.05 \cdot 10^6$, and the population of South Carolina was about $4.01 \cdot 10^6$. Write the combined populations of these two states in standard form.

LESSON
3-5
Practice B
Multiplying Decimals
Find each product.

1.
$$\begin{array}{r} 0.7 \\ \times 0.3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 0.05 \\ \times 0.4 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 8.0 \\ \times 0.02 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 3.5 \\ \times 0.2 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 12.1 \\ \times 0.01 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 9.0 \\ \times 0.9 \\ \hline \end{array}$$

7. $0.04 \cdot 0.58$

8. $2.15 \cdot 1.5$

9. $1.73 \cdot 0.8$

10. $6.017 \cdot 2.0$

11. $3.96 \cdot 0.4$

12. $0.7 \cdot 0.009$

Evaluate $8x$ for each value of x .

13. $x = 0.5$

14. $x = 2.3$

15. $x = 0.74$

16. $x = 3.12$

17. $x = 0.587$

18. $x = 14.08$

19. The average mail carrier walks 4.8 kilometers in a workday. How far do most mail carriers walk in a 6-day week? There are 27 working days in July, so how far will a mail carrier walk in July?

20. A deli charges \$3.45 for a pound of turkey. If Tim wants to purchase 2.4 pounds, how much will it cost?