

Name _____ Date _____



1.3 Puzzle Time

What Happens When A Frog Double-Parks On A Lily Pad?

Write the letter of each answer in the box containing the exercise number.

Solve the equation.

1. $x + 36 = 4x$
2. $6a + 12 = 2(3a - 8)$
3. $\frac{3}{2}p - 14 = p + 13$
4. $7 - 4.9t = 15 + 7.6t$
5. $\frac{1}{3}(12f - 3) = 4f - 1$
6. $\frac{1}{3}(b + 6) = \frac{1}{4}b + 8$
7. $\frac{3}{5}(2m - 10) = \frac{2}{3}m + 10$
8. $8.2(s + 4) = 6.7s + 5.2$
9. On Monday, you run on a treadmill for $\frac{1}{2}$ hour at x miles per hour. On Tuesday, you walk the same distance on the treadmill, at 2 miles per hour slower, and it takes you $\frac{3}{4}$ hour. How many miles did you run on the treadmill on Monday?
10. Jess spent $7x$ minutes on the computer. Her sister spent $5x + 10$ minutes on the computer, which was the same amount of time Jess spent. How many minutes was Jess on the computer?
11. A rectangle is 6 units wide and $x - 8$ units long. It has the same area as a triangle with a height of 7 units and a base of $x - 3$ units. What is the area of the rectangle?

Answers

- Y. 72
 A. -18.4
 T. 42
 O. no solution
 A. 35
 S. 54
 A. 12
 D. -0.64
 W. 3
 I. infinitely many solutions
 T. 30

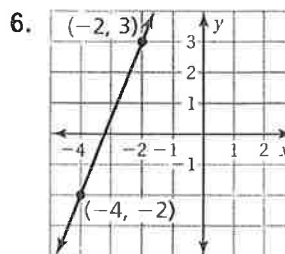
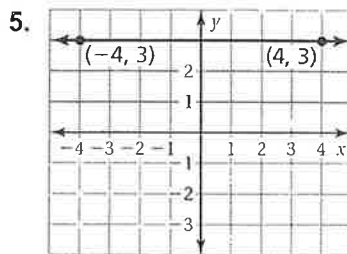
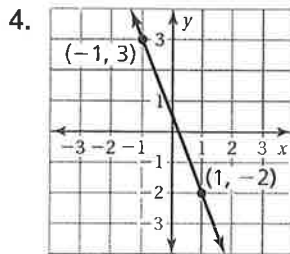
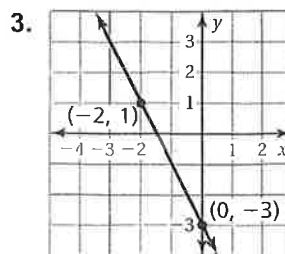
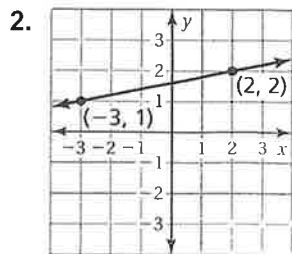
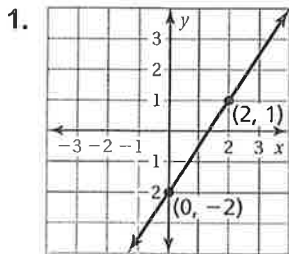
5	7		3		11	2	10	4		8	9	1	6
---	---	--	---	--	----	---	----	---	--	---	---	---	---

4.2 Puzzle Time

What Did One Poppy Seed Say To The Other?

Circle the letter of each correct answer in the boxes below. The circled letters will spell out the answer to the riddle.

Find the slope of the line through the given points.



7. $(1, 4), (3, -2)$

8. $(1, 2), (1, -2)$

9.

x	-5	-3	3	5
y	15	7	-17	-25

I	T	M	S	A	O	N	H	A	P	L	R	O	M	E	L	S	L
-2	$\frac{2}{5}$	0	$\frac{1}{6}$	$\frac{4}{3}$	$\frac{1}{5}$	-3	$\frac{1}{4}$	$\frac{3}{2}$	$\frac{1}{50}$	1	-4	$\frac{5}{2}$	$-\frac{1}{3}$	2	$-\frac{5}{2}$	5	und.

4.4 Puzzle Time

Did You Hear About...

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P		

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

$\frac{3}{2}$ MANY
$-\frac{1}{2}$ WHO
-12 THAT
-7 SO
0.25 SEASON
-5 GAVE
-2 FOR
16 TICKETS
$\frac{2}{3}$ THE
-8 DRIVING

Find the slope of the graph of the linear equation.

- A. $3y = 2x + 3$ B. $y = -x - 2$
 C. $4y = -2x + 12$ D. $5y - 10 = x$

Find the y-intercept of the graph of the linear equation.

- E. $y = 4x - 4$ F. $2y = x - 4$
 G. $y - 12 = -9x$ H. $7 + y = 4.3x$

Find the x-intercept of the graph of the linear equation.

- I. $y = 6x - 9$ J. $3y = 2x + 36$
 K. $2y = -5x + 7$ L. $3y - 9 = 4x$
 M. $y = 1.6x + 8$ N. $y + 15 = 12.5x$

- O. Shannon's hair is 12 inches long and grows 0.25 inch per month. In an equation that represents the length y of her hair after x months, what number represents the slope?
 P. You have a \$20 gift card to a coffee shop. Each time you go there, you get chai tea for \$1.25. The equation $y = -1.25x + 20$ represents how much you have left on the gift card after x visits. How many chai teas can you purchase before the balance on your card runs out?

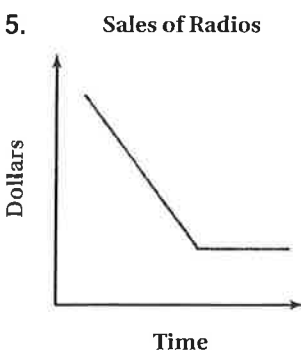
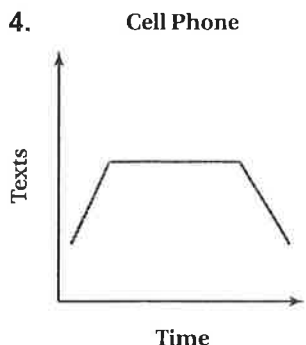
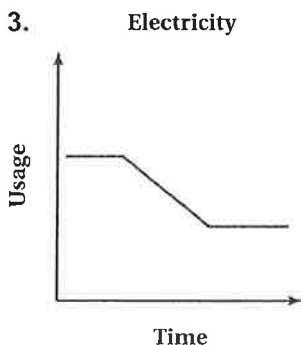
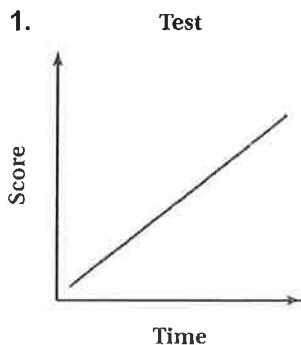
-4 STOPPED
5 HAD
$-\frac{9}{4}$ POLICE
-1 LADY
22 CAR
$\frac{7}{5}$ THE
-18 TIMES
$\frac{1}{5}$ GOT
1.2 HER
12 SPEEDING

6.5 Puzzle Time

What Has Many Keys That Fit No Locks?

Write the letter of each answer in the box containing the exercise number.

Describe the relationship between the two quantities.



5	3	1	4	2
---	---	---	---	---

Answers

- P. The amount of money in sales of radios decreased at a constant rate then remained constant.
- K. Test scores decreased at a constant rate.
- L. The amount of usage of electricity was constant, increased at a constant rate, then remained constant.
- N. The number of texts increased at a constant rate, then was constant, and finally decreased at a constant rate.
- A. During the shopping trip, the amount of money increased at an increasing rate.
- I. The amount of usage of electricity was constant, decreased at a constant rate, then remained constant.
- E. The number of texts decreased at a constant rate, then was constant, and finally increased at a constant rate.
- A. Test scores increased at a constant rate.
- B. The amount of money in sales of radios increased at a constant rate then remained constant.
- O. During the shopping trip, the amount of money decreased at a decreasing rate.



Puzzle Time

What Did One Dog Say To The Other Dog?

Write the letter of each answer in the box containing the exercise number.

Find the hypotenuse c of the right triangle with the given side lengths a and b .

1. $a = 15, b = 20$ 2. $a = 5, b = 12$
 3. $a = 13, b = 84$ 4. $a = 65, b = 72$
 5. $a = 6, b = 17.5$ 6. $a = 6\frac{2}{3}, b = 7$

Find the side length b of the right triangle with the given hypotenuse c and side length a .

7. $c = 61, a = 11$ 8. $c = 82, a = 80$
 9. $c = 34, a = 16$ 10. $c = 65, a = 63$
 11. $c = 13, a = 6.6$ 12. $c = 10\frac{3}{5}, a = 5\frac{3}{5}$
 13. The flap of an envelope has two side lengths that are each 10 centimeters long and meet at a right angle. How long is the envelope? Round your answer to the nearest tenth.
 14. A middle school gym is 60 feet wide and 100 feet long. If you stand in one corner of the gym, how many feet away is the corner diagonally across from you? Round your answer to the nearest tenth.

Answers

- T. $9\frac{2}{3}$
 P. 14.1
 E. 18.5
 D. 18
 N. 25
 U. 9
 O. 97
 H. 116.6
 N. 60
 G. 30
 O. 13
 M. 11.2
 I. 85
 S. 16

10	6	2	13		14	4	12	1	8	3	7	9		11	5
----	---	---	----	--	----	---	----	---	---	---	---	---	--	----	---



Puzzle Time

What Do Bumblebees Sing In The Shower?

Write the letter of each answer in the box containing the exercise number.

Write an equation of a line of fit for the data.

1. (0, 10), (1, 10), (1, 25), (1, 20), (2, 30), (3, 40), (3, 50), (4, 40)

C. $y = -10x - 10$

D. $y = -10x + 10$

E. $y = 10x + 10$

2. (0, 14), (1, 13), (2, 9), (3, 7), (4, 5), (5, 4), (6, 3), (6, 2), (7, 1)

B. $y = -2x + 14$

C. $y = 2x + 14$

D. $y = 2x - 14$

3. (10, 5), (25, 20), (30, 30), (50, 35), (50, 40), (60, 50), (70, 75), (80, 60)

C. $y = \frac{22}{25}x + 2$

D. $y = -\frac{22}{25}x + 2$

E. $y = \frac{22}{25}x - 2$

4. (40, 120), (50, 100), (70, 100), (80, 60), (100, 60), (110, 20), (120, 20), (130, 10)

A. $y = -\frac{5}{4}x - 170$

B. $y = -\frac{5}{4}x + 170$

C. $y = \frac{5}{4}x + 170$

Use a graphing calculator to find an equation of the line of best fit.

5. (0, 1), (1, 1.5), (2, 2), (2, 2.5), (3, 2), (3, 3.75), (4, 3.5), (4, 4)

O. $y = 0.70x - 0.88$

P. $y = 0.70x + 0.88$

Q. $y = -0.70x + 0.88$

6. (0, 1), (1, 1.5), (1.5, 1.25), (2, 1.5), (3, 2), (3, 2.5), (4.5, 4), (5, 5.25)

M. $y = -0.81x + 0.35$

N. $y = 0.81x - 0.35$

O. $y = 0.81x + 0.35$

4	3	1	2	6	5
---	---	---	---	---	---



10.4 Puzzle Time

What Happened When The Tree Saw The Ghost?

Circle the letter of each correct answer in the boxes below. The circled letters will spell out the answer to the riddle.

Evaluate the expression.

1. $7^{-5} \cdot 7^3$

2. $5^2 \cdot 5^{-6}$

3. $\frac{2^7}{2^{10}}$

4. $\frac{6^0}{6^3}$

5. $\frac{(-8)^3}{(-8)^5}$

6. $\frac{(2.2)^7}{(2.2)^9}$

7. $\frac{4^5}{4^4} \cdot \frac{4^8}{4^{13}}$

8. $\frac{(-9)^3}{(-9)^7 \cdot (-9)^{-2}}$

Simplify the expression using only positive exponents.

9. $3^{-2}a^4$

10. $12^{-1}t^{-3}$

11. $\frac{b^4}{5^{-2}b^8}$

12. $\frac{14r^8}{2r^{15}}$

13. $\frac{x^5 \cdot y^6}{2^{-2} \cdot x^0 \cdot y^9}$

14. $\frac{6 \cdot f^{-4} \cdot g^2}{2 \cdot f^{-4} \cdot g^{-1}}$

H	A	I	S	T	R	M	E	W	L	A	N	S	U	V	D	Y
8	$\frac{4x^4}{y^2}$	$\frac{1}{12t^3}$	$\frac{1}{16}$	$\frac{1}{49}$	$\frac{1}{9a^4}$	$\frac{1}{36}$	$7r^7$	$\frac{1}{4.84}$	$3fg^3$	$\frac{1}{216}$	81	$\frac{1}{625}$	$\frac{x^5}{4y^3}$	$\frac{25}{b^2}$	49	$-\frac{1}{64}$
I	P	T	E	G	T	R	O	I	S	F	Q	I	K	E	B	D
$\frac{12}{t^3}$	$3g^3$	$\frac{1}{125}$	$\frac{1}{8}$	4.84	$\frac{25}{b^4}$	$\frac{1}{81}$	-8	$\frac{a^4}{9}$	64	$\frac{4x^5}{y^3}$	$\frac{3}{fg}$	$\frac{1}{64}$	-16	$\frac{1}{256}$	$\frac{t^3}{12}$	$\frac{7}{r^7}$