Name _____ Date _____

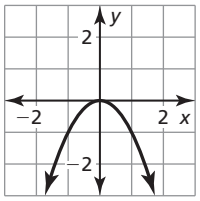
3.2 Puzzle Time

What Do You Get When You Cross A Tortoise And A Porcupine?

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

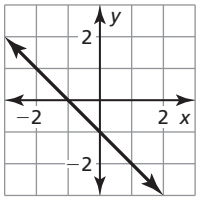
Determine whether the graph, table, or equation represents a linear or nonlinear function.

1.



D. linear **E.** nonlinear

2.



O. linear **P.** nonlinear

3.

x	2	4	6	8
y	21	18	15	12

A. linear **B.** nonlinear

4.

x	−13	−9	−5	−1
y	27	30	27	22

N. linear **O.** nonlinear

5. $y = \frac{1}{7}(x - 28) + 16$

W. linear **X.** nonlinear

6. $y = -2x^2 + 7$

K. linear **L.** nonlinear

7. $y = 14 - \frac{1}{5}x$

P. linear **Q.** nonlinear

8. $3 - \frac{1}{9}y = 8x - 11$

K. linear **L.** nonlinear

9. The function $y = 16 + 0.75x$ represents the cost y (in dollars) of a large pizza with x extra toppings.

S. linear **T.** nonlinear

3		9	6	2	5	7	4	8	1

Name_____ Date _____

3.3 Puzzle Time

How Does A Bee Get To School?

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

Evaluate the function for the given value of *x*.

1. $g(x) = x - 7; x = 4$

2. $f(x) = -2x; x = -6$

3. $k(x) = -\frac{3}{4}x - 11; x = -12$

4. $t(x) = 9x + 10; x = -\frac{1}{6}$

5. $g(x) = 15 - \frac{7}{8}x; x = 24$

6. $c(x) = 0.25x - 3; x = 10$

7. $w(x) = 21 - 6x - 13; x = \frac{1}{2}$

8. $p(x) = -\frac{1}{4}(x + 36) - 14; x = -8$

Find the value of *x* so that the function has the given value.

9. $b(x) = 8x; b(x) = -56$

10. $h(x) = -\frac{5}{6}x; h(x) = 10$

11. $n(x) = 16 - 0.5x; n(x) = 48$

12. $r(x) = \frac{8}{9}x - 17; r(x) = 15$

13. $s(x) = -3\left(x - \frac{2}{3}\right) + 19; s(x) = 0$

14. The local cable company charges \$90 per month for basic cable and \$12 per month for each additional premium cable channel. The function $c(x) = 90 + 12x$ represents the monthly charge (in dollars), where x represents the number of additional premium channels. How many additional premium channels would you have ordered if your bill was \$114 per month?

B	I	V	T	K	T	C	A	J	E	K	I	G	E	O	S
4	5	−10	$\frac{17}{2}$	15	36	3	12	9	0	−21	−4	−13	−7	20	−6

M	T	N	H	S	E	D	B	R	U	F	A	Z	Q	P	Z
13	−0.5	25	2	−9	−2	−1	7	10	−12	−15	−25	−3	1	26	−64