

For items 1 to 9, match the letter for each equation to a corresponding graph or data table.

A $y = x$			B $2x = y + 1$			C $y = 1.5$			D $y = -x + 1$																																																																	
1. 			2. 			3. 			4. 																																																																	
5. <table><tr><td>x</td><td>y</td></tr><tr><td>2</td><td>1.5</td></tr><tr><td>1</td><td>1.5</td></tr><tr><td>0</td><td>1.5</td></tr><tr><td>-1</td><td>1.5</td></tr><tr><td>-2</td><td>1.5</td></tr></table>			x	y	2	1.5	1	1.5	0	1.5	-1	1.5	-2	1.5	6. <table><tr><td>x</td><td>y</td></tr><tr><td>2</td><td>-1</td></tr><tr><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td></tr><tr><td>-1</td><td>2</td></tr><tr><td>-2</td><td>3</td></tr></table>			x	y	2	-1	1	0	0	1	-1	2	-2	3	7. <table><tr><td>x</td><td>y</td></tr><tr><td>2</td><td>3</td></tr><tr><td>1</td><td>1</td></tr><tr><td>0</td><td>-1</td></tr><tr><td>-1</td><td>-3</td></tr><tr><td>-2</td><td>-5</td></tr></table>			x	y	2	3	1	1	0	-1	-1	-3	-2	-5	8. <table><tr><td>x</td><td>y</td></tr><tr><td>4</td><td>4</td></tr><tr><td>2</td><td>2</td></tr><tr><td>0</td><td>0</td></tr><tr><td>-2</td><td>-2</td></tr><tr><td>-4</td><td>-4</td></tr></table>			x	y	4	4	2	2	0	0	-2	-2	-4	-4	9. <table><tr><td>x</td><td>y</td></tr><tr><td>4</td><td>-3</td></tr><tr><td>2</td><td>-1</td></tr><tr><td>0</td><td>1</td></tr><tr><td>-2</td><td>3</td></tr><tr><td>-4</td><td>5</td></tr></table>			x	y	4	-3	2	-1	0	1	-2	3	-4	5
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10. Identify the **graph(s)** above representing the given relationship by circling the corresponding number(s) below:

The sum of a variable and one is equal to two multiplied by a second variable.

1 2 3 4

11. Identify the **table(s)** above representing a rate of change of 0 by circling the corresponding number(s) below.

5 6 7 8 9

12. Jake graphed $2x = y + 1$. Jamie graphed the equation $y = 4x - 3$. How does Jamie's graph compare to Jake's graph?

- A. Jamie's graph is translated down 3 units from Jake's graph.
- B. Jamie's graph is translated up 3 units from Jake's graph.
- C. Jamie's graph is steeper than Jake's graph.
- D. Jamie's graph is less steep than Jake's graph.

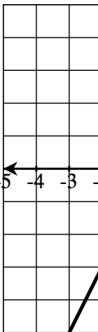
Answer _____

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For items 13 to 21, match the letter of each data table to a corresponding graph or equation.

A	x	y	B	x	y	C	x	y	D	x	y
	4	16		2	4		2	5		4	3
	2	4		1	2		1	3		2	1
	0	0		0	1		0	1		0	-1
	-2	4		-1	$\frac{1}{2}$		-1	-1		-2	-3
	-4	16		-2	$\frac{1}{4}$		-2	-3		-4	-5

13. 	14. 	15. 	16. 
17. $y = 2x + 1$ 	18. $y = 2^x$ 	19. $y = x - 1$ 	20. $y = x^2$ 
21. $3y = 6x + 3$ 			



22. Identify the **table(s)** above representing a constant rate of change by circling the corresponding letter(s) below.

A **B** **C** **D**

24. Kate graphed $y = x^2$. Jim graphed the equation $y = x^2 - 4$. How does Jim's graph compare to Kate's graph?

- A.** Jim's graph is translated down 4 units from Kate's graph.
B. Jim's graph is translated up 4 units from Kate's graph.

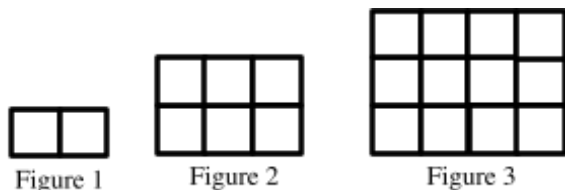
23. Identify the **equation(s)** above representing a non-constant rate of change by circling the corresponding number(s) below.

17 18 19 20 21

- C. Jim's graph is translated left 4 units from Kate's graph.
D. Jim's graph is narrower than Kate's graph.

Answer _____

25. Tiles are arranged in a pattern as shown in the drawing below.



Let y represent the number of tiles in the figure and n represent the figure number. Which of the following functions represents the pattern?

- A. $y = n^2 + 2$
B. $y = 2n + 1$
C. $y = n(n + 1)$
D. It is not possible to represent the pattern with a function.

Answer _____

26. The graph of which of the following equations would be perpendicular to the graph of $3y = 6x - 9$?

- A. $y = 2x + 3$, because its slope is the same as the given equation.
B. $y = -2x + 3$, because its slope is opposite in sign as the given equation.
C. $y = \frac{1}{2}x + 3$, because its slope is the reciprocal of the slope in the given equation.
D. $y = -\frac{1}{2}x + 3$, because its slope is opposite in sign and the reciprocal of the slope in the given equation

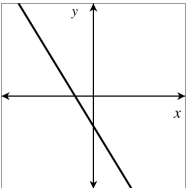
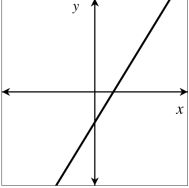
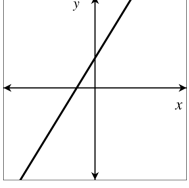
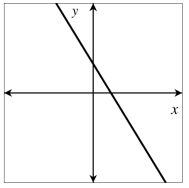
Answer _____

27. Asa drew a line with a slope = 0. Emily drew a line with an undefined slope. Which statement is true?

- A. Asa's graph was vertical and crossed the y -axis.
B. Asa's graph was horizontal and crossed the x -axis.
C. Emily's graph was vertical and crossed the x -axis.
D. Emily's graph was horizontal and crossed the y -axis.

28. David graphed the equation $y = 2x^2$. Sarah graphed the equation $y = \frac{1}{2}x^2 + 1$. How does Sarah's graph compare to David's graph?

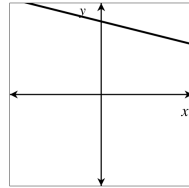
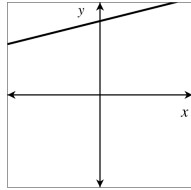
- A. Sarah's graph is wider and is translated up 1 unit from David's graph.
B. Sarah's graph is narrower and is translated up 1 unit from David's graph.
C. Sarah's graph is wider and is translated left 1 unit from David's graph.

Answer _____	D. Sarah's graph is translated up 1 unit and right $\frac{1}{2}$ of a unit from David's graph. Answer _____
29. Select the pair of equations and explanation of parallel lines. A. $2x + y = 8$ and $2y = 4x + 16$, because they have the same slope. B. $2y = -4x - 6$ and $-2y = -4x - 4$, because they have opposite slopes. C. $y = x + 1$ and $-x + y = 1$, because they have opposite slopes. D. $y = 3x + 9$ and $2y = 6x - 2$, because they have the same slope. Answer _____	30. Shawn graphed $y = x^2$. Now he wants to make his graph narrower and translated right. What might the equation of his new graph be? A. $y = (x + 1)^2 + 3$ B. $y = \frac{1}{2}(x + 1)^2 - 3$ C. $y = 2(x - 1)^2 - 1$ D. $y = \frac{1}{2}(x - 1)^2 + 1$ Answer _____
31. Jill said that $y > -2x + 1$ would have solutions in all quadrants except quadrant III. Do you agree with Jill? A. Agree, because the line $y = -2x + 1$ goes through quadrants I, II and IV and the solution would be all points below the line. B. Agree, because the line $y = -2x + 1$ goes through quadrants I, II, and IV and the solution would be all points above the line. C. Disagree, because you cannot have solutions in three quadrants. D. Disagree, because you reverse the inequality symbol when there is a negative sign. There would be solutions in quadrant III. Answer _____	32. Which of the following predicts a line that goes through Quadrants II, III, and IV? A. $y = 2x - 3$ B. $y = -2x - 3$ C. $y = x + 1$ D. $y = -x + 1$ Answer _____
33. Which of the following graphs represent the equation $y = -0.999 + 1.00001x$? A.  B.  C.  D.  Answer _____	

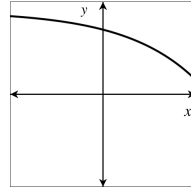
34. Which of the following graphs represent the table?

x	0	1	2	3	4	5
y	600	562.5	525	487.5	450	412.5

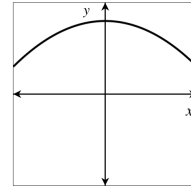
A.



B.



C.



D.

Answer _____