2.5

READY

Topic: Writing equations of lines.

Write the equation of a line in slope-intercept form: y = mx + b, using the given information.

1. m = -7, b = 4   2. m = 3/8, b = -3   3. m = 16, b = -1/5

Write the equation of the line in point-slope form: $y = m(x – x_1) + y_1$, using the given information.

4. m = 9, (0. -7)   5. m = 2/3, (-6, 1)   6. m = -5, (4, 11)

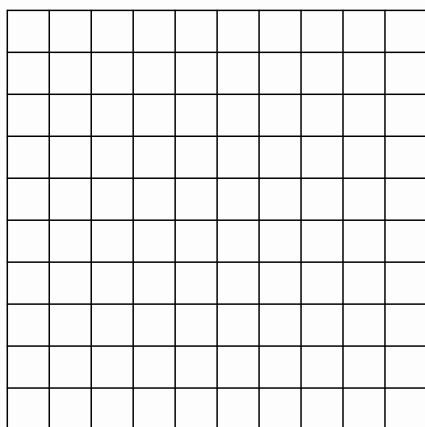7. (2,-5) (-3, 10)   8. (0, -9) (3, 0)   9. (-4, 8) (3, 1)

SET

Topic: Graphing linear and exponential functions

Make a graph of the function based on the following information. Add your axes. Choose an appropriate scale and label your graph. Then write the equation of the function.
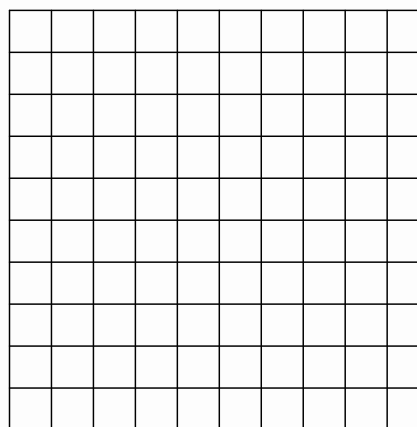
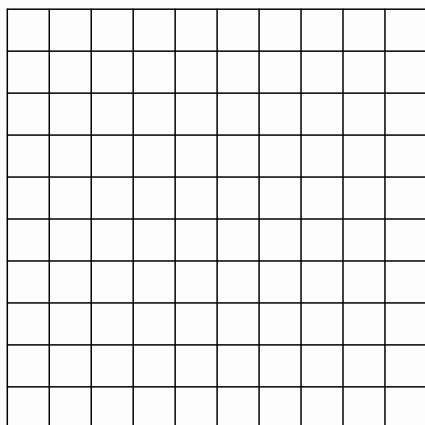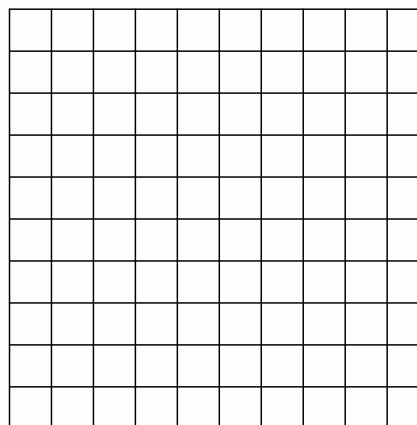|	
10. The beginning value is 5 and its value is 3 units smaller at each stage. Equation:	11. The beginning value is 16 and its value is ¼ smaller at each stage. Equation:
12. The beginning value is 1 and its value is 10 times as big at each stage. Equation:	13. The beginning value is -8 and its value is 2 units larger at each stage. Equation:

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GO

Topic: Equivalent equations

Prove that the two equations are equivalent by simplifying the equation on the right side of the equal sign. The justification in the example is to help you understand the steps for simplifying. You do NOT need to justify your steps.

Example:	Justification
$2x - 4 = 8 + x - 5x + 6(x - 2)$	Add $x - 5x$ and distribute the 6 over $(x - 2)$
$= 8 - 4x + 6x - 12$	Combine like terms.
$= -4 + 2x$	
$2x - 4 = 2x - 4$	Commutative property of addition

14. $x - 5 = 5x - 7 + 2(3x + 1) - 10x$

15. $6 - 13x = 24 - 10(2x + 8) + 62 + 7x$

16. $14x + 2 = 2x - 3(-4x - 5) - 13$

17. $x + 3 = 6(x + 3) - 5(x + 3)$

18. $4 = 7(2x + 1) - 5x - 3(3x + 1)$

19. $x = 12 + 8x - 3(x + 4) - 4x$

20. Write an expression that equals $(x - 13)$. It must have at least two sets of parentheses and one minus sign. Verify that it is equal to $(x - 13)$.