

Name:

Date:

Hour:

Algebra 1  
WS Unit 3 Test Review

1. Write the equation of the line, in slope intercept form, for each situation.

a. Passing through  $(-2, 5)$  and  $m = 3$

b. Passing through  $(6, 4)$  and  $m = \frac{2}{3}$

c. Passing through  $(1, 2)$  and  $(3, -2)$

d. If  $f(4) = -2$  and  $f(8) = 4$

e. If  $g(2) = 3$  and  $g(6) = 5$

f. Passing through  $(-1, 3)$  and parallel to  $y = 2x + 2$

g. Passing through  $(18, 2)$  and parallel to  $3y - x = -12$

h. Passing through  $(7, 10)$  and perpendicular to  $y = \frac{1}{2}x - 9$

i. Passing through  $(-3, 3)$  and perpendicular to  $2y = 8x - 6$

2. Determine which lines are parallel or perpendicular.

Line a:  $y = 4x - 3$

Line b:  $-2x - 8y = 14$

Line c: passing thru  $(-2, 7)$  and  $(-3, 11)$

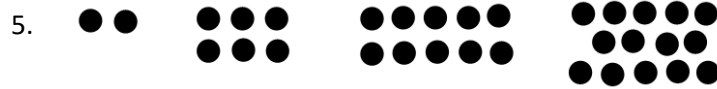
Line d: passing thru  $(10, -5)$  and  $(12, 3)$

Write a function to represent each table, pattern or sequence.

3. 

x	1	2	3	4
f(x)	6	2	-2	-6

4.  $a_1 = -11, d = 3$



Simplify each.

6.  $x^{-9}$

7.  $6x^2y^5 \cdot 5x^4y^7$

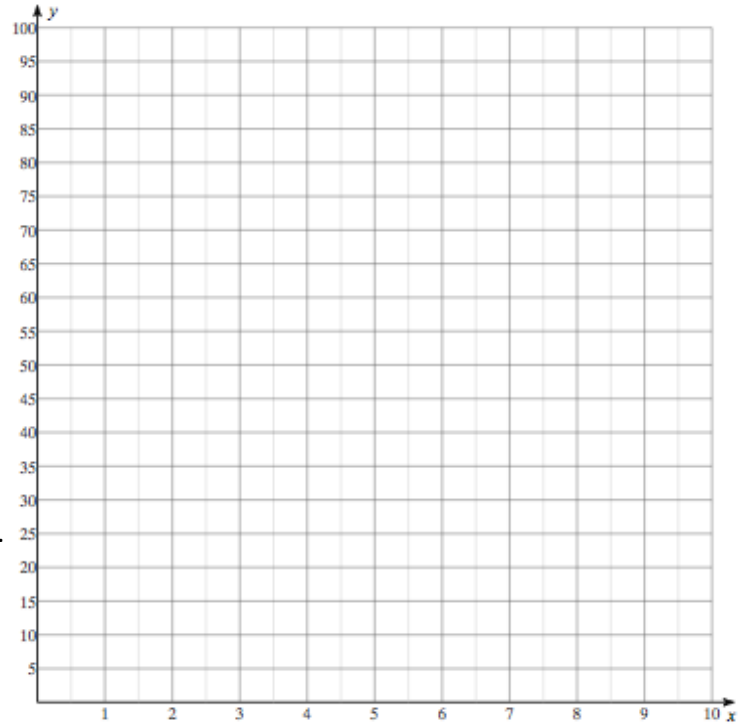
8.  $(4xy^4)^2$

9.  $\frac{x^3y^9}{x^5y^2}$

10. The table below shows relationship between the hours studied by a student and their test score.

<b>Hours, <math>x</math></b>	2	2	3	5	4	1	3	6
<b>Score, <math>y</math></b>	44	50	60	92	88	35	50	95

- Draw a scatter plot.
- Write the equation of your line of best fit.
- Describe the correlation.
- Estimate the correlation coefficient.
- What is the slope of your line of best fit? Interpret the value.



- What is the y-intercept of your line of best fit? Interpret the value.
- Interpret the point  $(7, 92)$  for this situation.
- Find  $x$  if  $y = 85$ . What does this value mean for this situation?