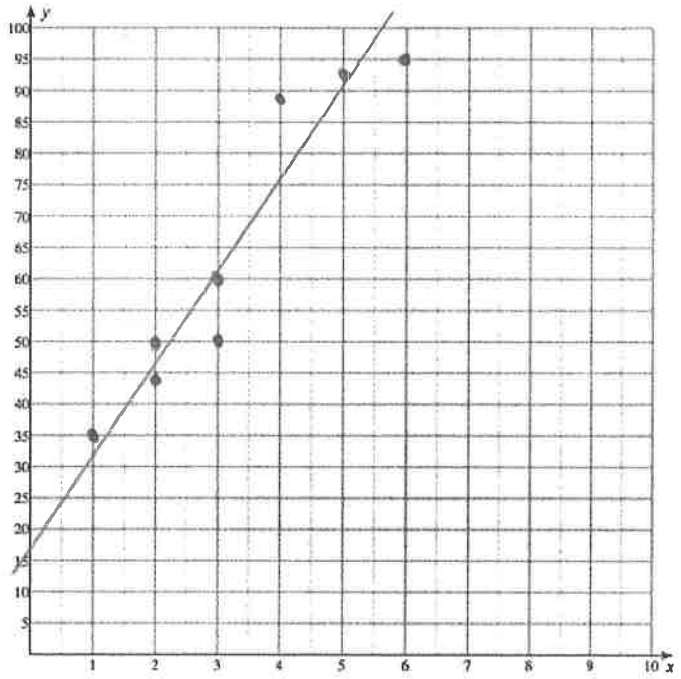
Name: Key Date: Hour:

Algebra 1
Review WS for Unit 2B Test

1. Draw a scatter plot for the hours studied and the test score.

Hours, x	2	2	3	5	4	1	3	6
Score, y	44	50	60	92	88	35	50	95



a. Draw a line of best fit.

b. Write the equation of your line of best fit.

$y = 13.56x + 20.17$

c. Describe the correlation.

Strong positive

d. Estimate the correlation coefficient.

$r \approx 0.95$

2. Write an equation for each transformation.

a. Down 9, reflected, compressed by your choice

$y = -\frac{1}{2}x - 9$

b. Up 4, stretched by 6

$y = 6x + 4$

c. Down 2, stretched by your choice, reflected

$y = -2x - 2$

3. Explain each transformation from the parent function.

a. $y = -4x + 3$

reflected
stretch
up 3

b. $y = \frac{6}{5}x - 7$

stretch
down 7

c. $y = -\frac{5}{9}x - 9$

reflected
compress
down 9

d. $y = \frac{2}{3}x + 6$

compress
up 6

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

4.

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

-4 -4 -4 -4

$a_n = -4n + 10$

5. $a_1 = -11,\ d = 3$

-3
-14

$a_n = 3n - 14$

6. 

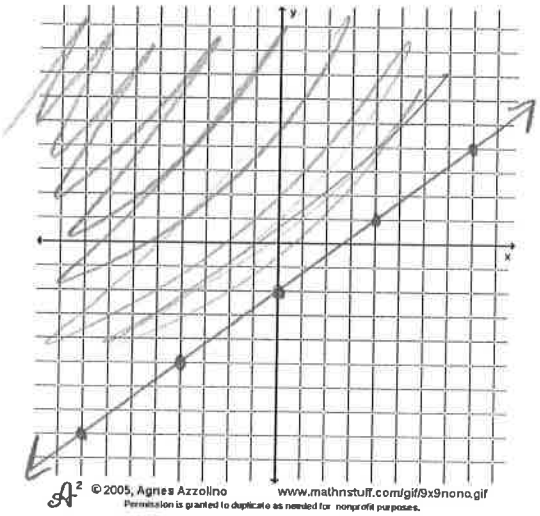
-2 2 6 10 14

+4 +4 +4 +4

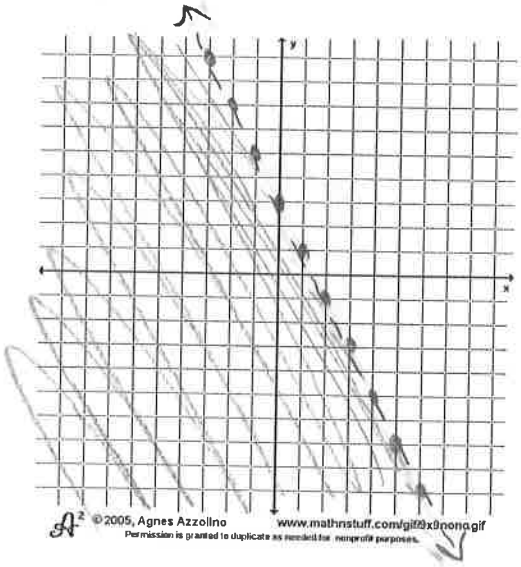
$a_n = 4n - 2$

Graph each linear inequality.

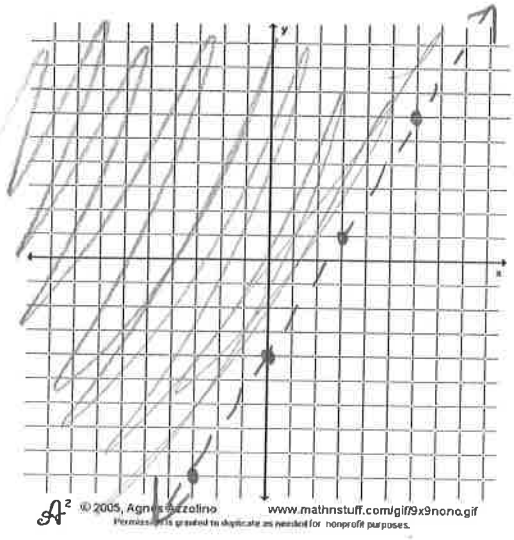
7. $y \geq \frac{3}{4}x - 2$



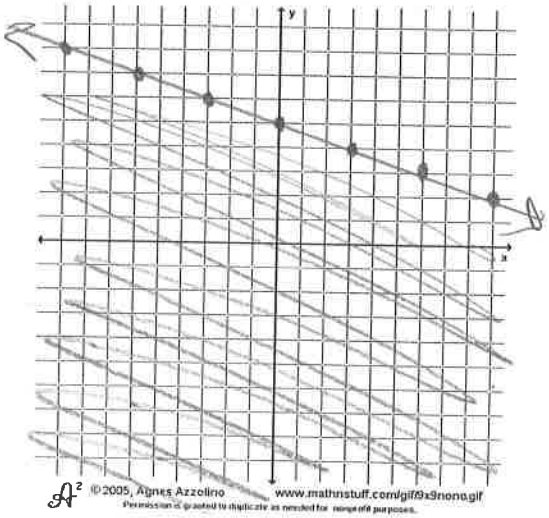
8. $y < -2x + 3$



9. $y > \frac{5}{3}x - 4$

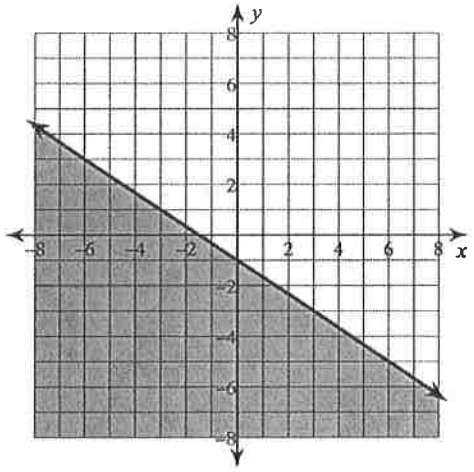


10. $y \leq -\frac{1}{3}x + 5$



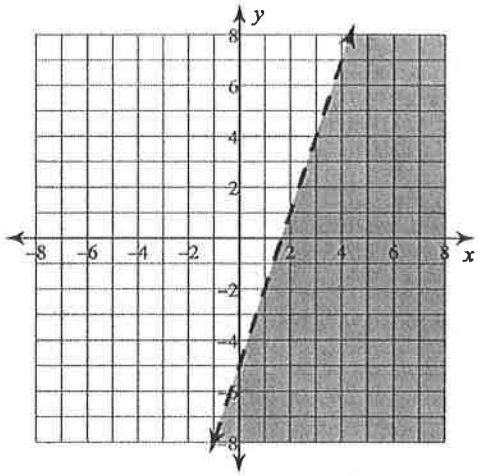
Write the linear inequality for each graph below.

11.



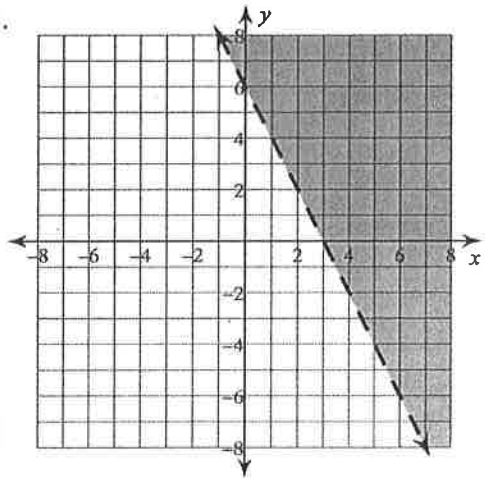
$y \leq -\frac{2}{3}x - 1$

12.



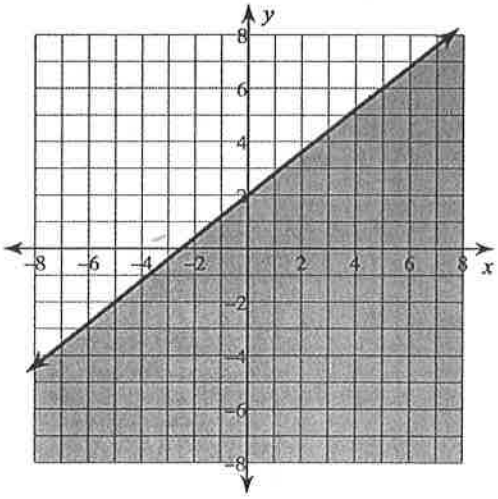
$y < 3x - 5$

13.



$y > -\frac{1}{2}x + 6$

14.



$y \leq \frac{4}{5}x + 2$

Simplify each.

15. x^{-9}

$\frac{1}{x^9}$

16. $6x^2y^5 \cdot 5x^4y^7$

$30x^6y^{12}$

17. $(4xy^4)^2$

$4^2x^2y^8$

$16x^2y^8$

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

$\frac{y^7}{x^2}$