

Algebra 1 Mastery Test #5 Review

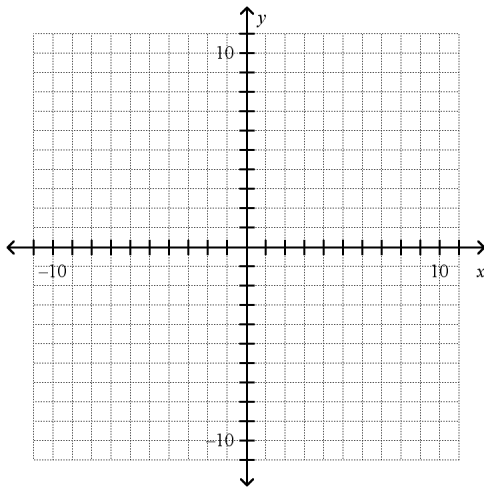
Solve the proportion. Check your solution.

1. $\frac{3}{x-4} = \frac{5}{x}$

2. Complete the table. Then graph the function.

$$y = \frac{3}{5}x - 2$$

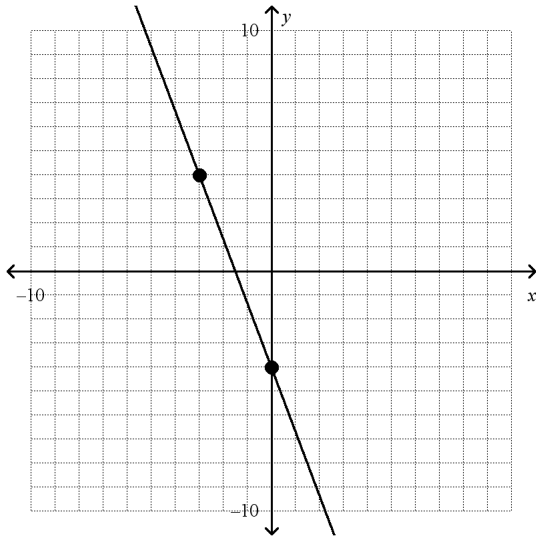
x	-3	-2	0	2	3
y					



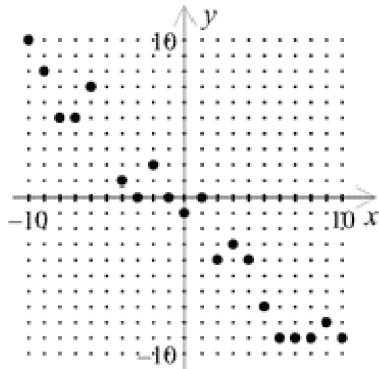
3. Find the slope of the line that contains $(-6, 8)$ and $(6, 8)$.

4. During the first 30 minutes of flight, a jet climbs from ground level to an altitude of about 43,000 ft. What is the jet's rate of change in altitude during this time? Round your answer to the nearest hundred.

5. Write an equation in slope-intercept form of the graph.

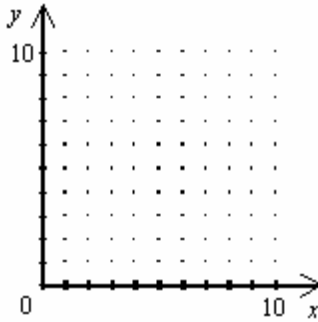


6. The cost of a school banquet is \$95 plus \$15 for each person attending. Write an equation that gives total cost as a function of the number of people attending. What is the cost for 77 people?
7. Write an equation in point-slope form of the line that passes through the points $(-5, -4)$ and $(6, 3)$.
8. Write an equation of the line that passes through $(-5, -1)$ and is parallel to the line $y = 4x - 6$.
9. What type of relationship is shown by the scatter plot?



10. Make a scatter plot of the data in the table. Draw a line of fit. Write an equation of the line.

x	1	2	6	8	10
y	3	4	6	4	6



Solve the inequality. Then graph its solution.

11. $y + 5 \geq 2$

12. Connie takes at least 47 seconds, s , to recite a poem. Write and graph an inequality to describe this situation.



13. Write the inequality illustrated by the graph below.



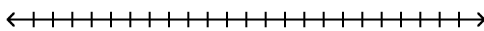
Solve and graph.

14. $-11w > -11$

15. Lev earns \$5.65 per hour working after school. He needs at least \$245 for a stereo system. Write and solve an inequality that describes how many hours he must work to reach his goal.

Solve the inequality. Then graph its solution.

16. $-\frac{x}{3} \leq -2$



Solve and graph.

17. $-7(4x - 3) \leq -7$

Solve.

18. $8b - 9 \leq 9b + 2$

Solve. Graph your solution.

19. $-4 \leq 2x + 10 \leq 4$

20. The cost of a box of stationery ranges from \$2.05 to \$2.75. Write and graph an inequality to describe this statement.



21. Solve the inequality $-3 > 2x - 1 > -5$. Graph your solution.

Solve the inequality.

22. $x + 5 > x + 7$ or $x + 3 \leq 3x - 4$

Solve.

23. $|4x + 2| = 3$

Solve the equation algebraically.

24. $|x - 2| - 2 = 7$

Solve. Graph your solution.

25. $|x + 3| \geq 3$

26. Solve the inequality $|2 - x| \leq 2$. Graph your solution.

Name: _____

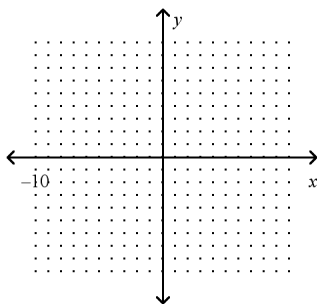
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Graph.

27. $-y \geq x - 1$

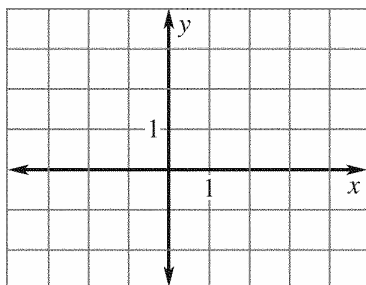
28. $y \leq 4x + 4$

29. $3x - 2y > -14$



30. Graph: $y \leq 2x + 4$

31. Graph $y \geq -\frac{1}{2}x$.

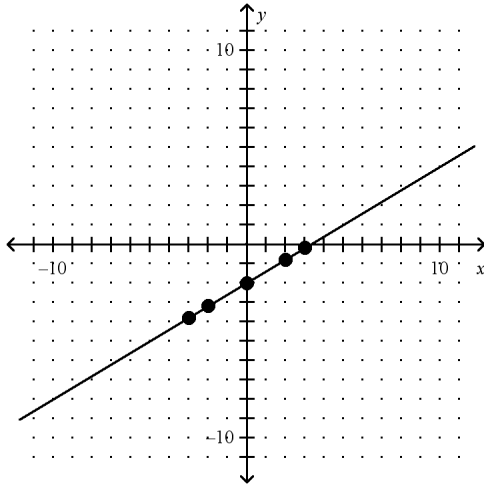


**Algebra 1 Mastery Test #5 Review
Answer Section**

1. 10

2.

x	-3	-2	0	2	3
y	$-3\frac{4}{5}$	$-3\frac{1}{5}$	-2	$-\frac{4}{5}$	$-\frac{1}{5}$



3. 0

4. 1400 feet per minute.

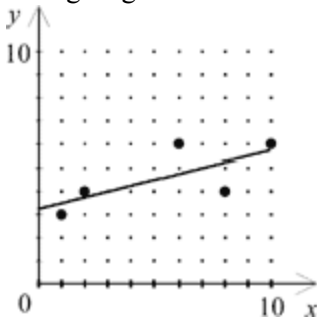
5. $y = -\frac{8}{3}x - 4$

6. $y = 15x + 95$; \$1250

7. $y + 4 = \frac{7}{11}(x + 5)$

8. $y = 4x + 19$

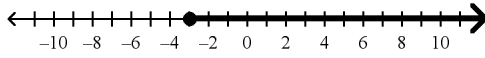
9. strong negative correlation



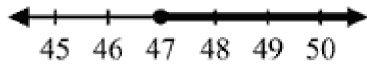
10.

Sample equation $y = 0.25x + 3.25$

11. $y \geq -3$

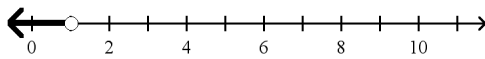


12. $s \geq 47$;



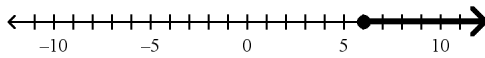
13. $x > -2$

14. $w < 1$

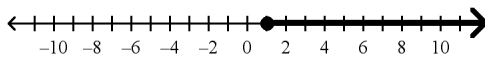


15. $5.65x \geq 245$
 $x \geq 44$ hours

16. $x \geq 6$

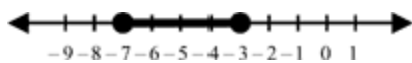


17. $x \geq 1$

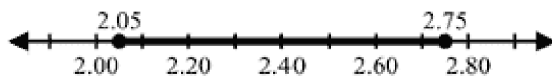


18. $b \geq -11$

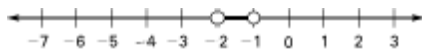
19. $-7 \leq x \leq -3$



20. $2.05 \leq c \leq 2.75$;



21. $-2 < x < -1$

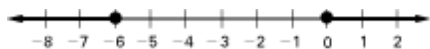


22. $x \geq \frac{7}{2}$

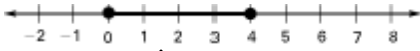
23. $\frac{1}{4}, -\frac{5}{4}$

24. 11, -7

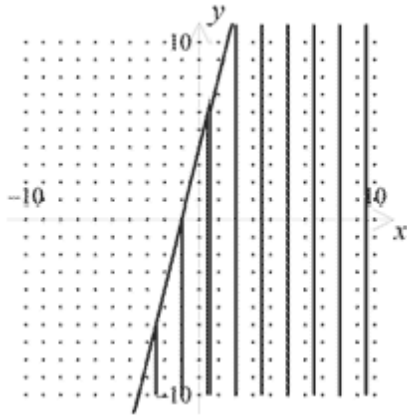
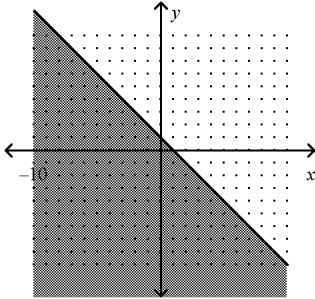
25. $x \leq -6$ or $x \geq 0$



26. $0 \leq x \leq 4$

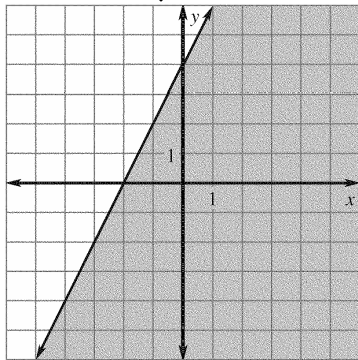
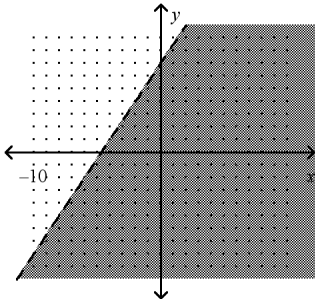


27.

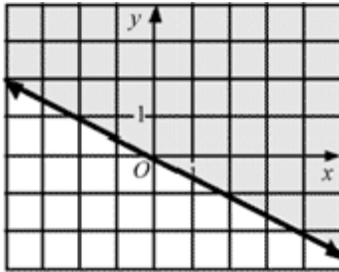


28.

29.



30.



31.