

# Algebra 2

## 0-Extra Practice

### 0-01

1. Solve  $3(x + 2) = 4x - 7$                       2. Solve  $-16x + 8 \geq 40$                       3. Solve for  $y$ :  $5x - 2y = 10$

### 0-02

4. Standard room temperature is  $20^\circ\text{C}$ . What is this in Fahrenheit?  
 5. A squirrel is burying nuts for winter. The table shows how many nuts,  $n$ , it has buried in  $t$  minutes. If the pattern continues, how many nuts will the squirrel bury in 20 minutes?

$t$ (min)	1	2	3	4
$f$ (nuts)	2	4	6	8

### 0-03

6. Solve  $|x - 4| = 12$                       7. Solve  $|2x + 1| = 11$                       8. Solve  $2|x - 4| \geq 15$

### 0-04

9. Find the slope of the line through  $(-2, -4)$  and  $(5, 3)$ .  
 10. Write the equation of the line with slope  $= \frac{1}{2}$  and passes through  $(2, 4)$ .  
 11. Write the equation of the line that passes through  $(-2, -4)$  and  $(5, 3)$ .

### 0-05

12. Graph  $y = -\frac{1}{3}x + 1$                       13. Graph  $y = 2x$ .  
 14. Graph  $2x - 5y = 10$ .

### 0-06

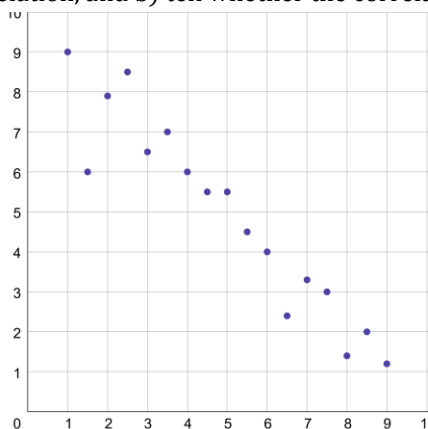
15. Describe the transformation.  $-2f(x) + 1$                       16. Graph  $y = 3|x - 2|$ .

### 0-07

17. Graph  $y > x + 1$ .                      18. Graph  $y \leq \frac{1}{2}|x - 1|$ .

### 0-08

19. For each scatter plot, a) tell whether the data have a *positive correlation*, a *negative correlation*, or approximately *no correlation*, and b) tell whether the correlation coefficient is closest to  $-1$ ,  $-0.5$ ,  $0$ ,  $0.5$ , or  $1$ .



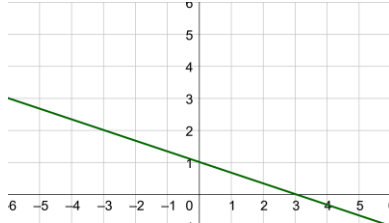
20. Draw a scatter plot using the data in the table, then write the equation of the best-fitting line.

$x$	0	1	2	3	4	5	6	7	8
$y$	0.8	2.1	3.4	4.7	6	7.3	8.6	9.9	11.2

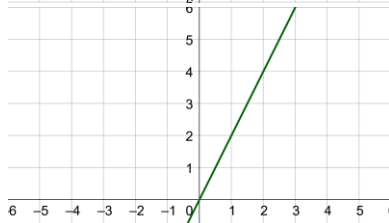


**Answers**

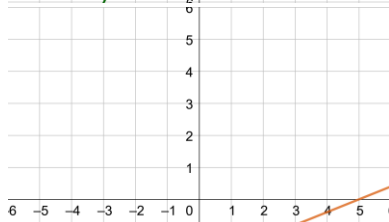
1.  $x = 13$
2.  $x \leq -2$
3.  $y = \frac{5}{2}x - 5$
4.  $68^{\circ}\text{F}$
5. 40 nuts
6.  $x = -8, 16$
7.  $x = -6, 5$
8.  $x \leq -\frac{7}{2}$  or  $x \geq \frac{23}{2}$
9.  $m = 1$
10.  $y = \frac{1}{2}x + 3$
11.  $y = x - 2$



12.

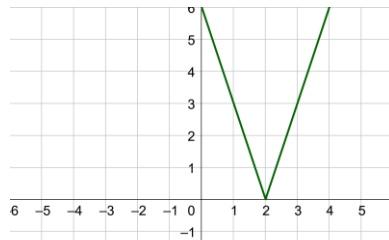


13.

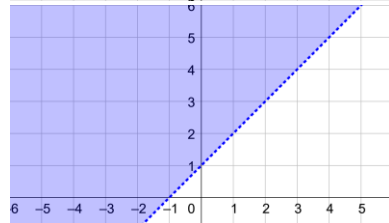


14.

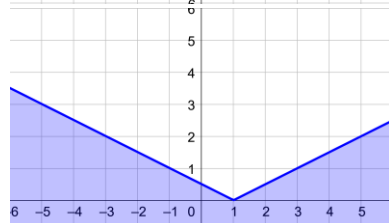
15. Reflect over  $x$ -axis, Vertical stretch by factor 2, moved 1 up



16.

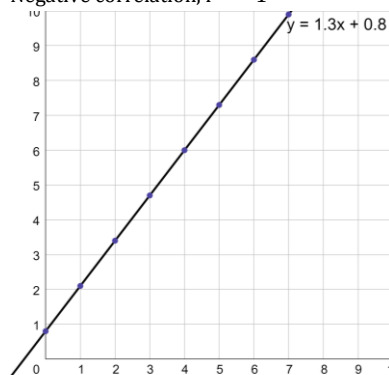


17.



18.

19. Negative correlation,  $r \approx -1$



20.