

2.4H Absolute Solutions

Name: _____ Per: _____

SHOW YOUR WORK IN PENCIL ONLY. NO WORK, NO CREDIT.

Solve each absolute value equation.

1. $|-3x| = 30$

3. $\left|\frac{n}{7}\right| = 5$

5. $|-4n| + n = 5$

2. $|x - 5| = 7$

4. $\frac{|-8-8n|}{6} = 5$

6. $-2 + |-4r - 9| = 29$

7. Looking at #5, What values of n would give no solution.

8. The average January temperature in a northern Canadian city is 1 degree F. The actual January temperature for that city may be about 5 degrees warmer or colder. Write one inequality to show the minimum and maximum temperatures.

9. Tanner machines each cylinder of the engines he works on to 4.01" diameter with a tolerance of 0.0002". Write an inequality that shows whether a cylinder's diameter, x , is acceptable.

10. A professional baseball should weight 5.125 ounces, with a tolerance of less than or equal to 0.125. Write one inequality that describes the acceptable weights for a baseball.

a. Inequality

b. Solve

c. Graph



Solve each inequality and graph its solution. (And shows intersection; or shows union.)

11. $-13 < n - 8 \leq -10$

12. $\frac{n}{5} > 2$ or $8n < 72$

13. $k + 5 \geq 1$ or $k - 7 < -17$

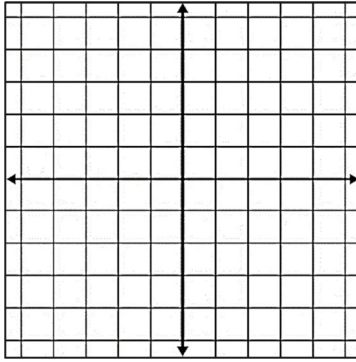


14. Use the following equation: $y = 2(x - 3)$.

a. Make a table

x	y
1	
2	
3	
4	
5	

b. Graph the equation

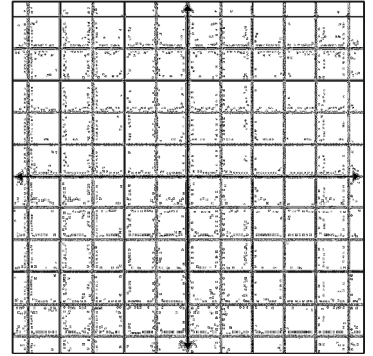


- c. List the y-intercept: _____
 d. List the x-intercept: _____
 e. List the slope: _____

15. Use the following $y = 2|x - 3|$

- a. Complete the table to the right.
 b. Graph the equation
 c. What is the y-intercept? _____
 d. What is the x-intercept? _____
 e. What is the slope? _____

x	y
1	
2	
3	
4	
5	



f. Write one question to ask in class about numbers 14 and 15: _____

g. Hypothesize how the graph change if the equation were $y = 2|x - 3| + 4$. _____

Solve each proportion

16. $\frac{2x+3}{x} = \frac{2x+3}{8}$

17. $\frac{2p+8}{2p+10} = \frac{26}{p+5}$

18. $\frac{x^3}{4} = \frac{8}{x}$

Solve each equation for the indicated variable.

19. $10x - 4r = 3r - 4d$, solve for x

21. $-3x + xr = -2(v - 2w)$, solve for x

20. $-2a + 3d = -\frac{3d}{r}$, solve for d

22. $24a = -12np$, solve for n