



- \*20 questions
- \*Calculators allowed
- \*Show all work/steps- use separate paper
- \*Recommend time frame 30min -45min

### Concepts of Absolute Value

1. True or False:  $-10$  and  $10$  are the same distance from zero on a number line?
2. Define absolute value in your own words
3. How do you set up an absolute value equation to solve?
4. How many solutions does an absolute value inequality have?
5. Evaluate  $|-3|$
6. Evaluate  $|15|$
7. Evaluate  $-|-9|$
8. Evaluate  $|-6| - (-7)$
9. Evaluate  $-5(|12| - |-4|)$
10. Evaluate  $|x^2|$  for  $x = -5.6$

### Solving Absolute Value Equations

11. Solve  $|2x + 4| = 12$
12. Solve  $4|x - 3| = 8$
13. Solve  $-3|x + 5| + 21 = 12$
14. Solve  $\frac{2}{3}|2x + 7| = 3$

Solving Absolute Value Inequalities

- 15. Solve and graph the solution set  $|2x + 4| > 10$
- 16. Solve and graph the solution set  $|x - 5| \leq 15$
- 17. Solve and graph the solution set  $|3x + 8| \geq 20$
- 18. Solve and graph the solution set  $\frac{1}{3}|2x + 4| - 6 < 4$

Graphing Absolute Value Functions

- 19. Graph the absolute value function  $y = |x - 3| + 5$
- 20. Write the absolute value function of the graph

