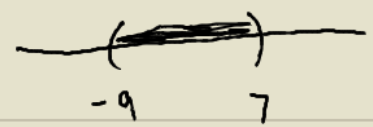
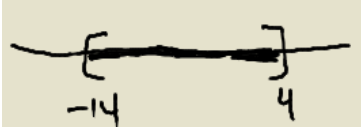
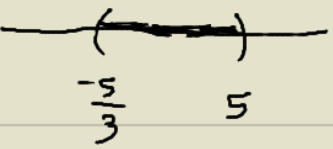
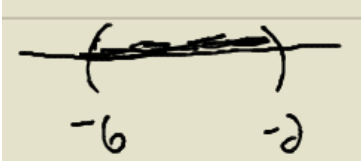


Absolute Value Equations and Inequalities - Key

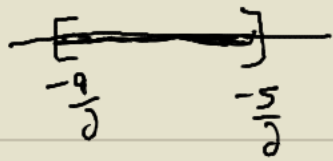
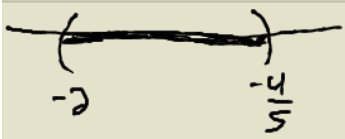
In problems 1-11, solve each absolute value equation.

1. $x = 10, x = -6$	2. $x = 2, x = \frac{1}{2}$
3. $x = \frac{-10}{7}, x = \frac{8}{7}$	4. $x = -8, x = 8$
5. $x = \frac{5}{3}, x = \frac{-7}{3}$	6. $x = -3, x = -7$
7. $x = \frac{6}{5}$	8. $x = \frac{29}{9}, x = -3$
9. $x = \frac{-4}{3}, x = \frac{2}{11}$	10. $x = \frac{1}{7}, x = \frac{1}{3}$
11. $x = \frac{1}{2}$	


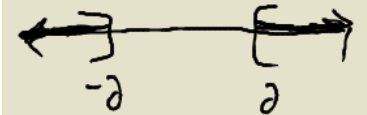

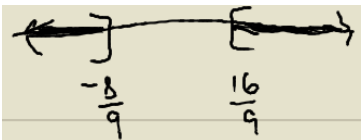
In problems 12-18, solve each absolute value inequality. Graph the solution set on a real number line.

<p>12. $-9 < x < 7$ $(-9, 7)$</p> 	<p>13. $-14 \leq x \leq 4$ $[-14, 4]$</p> 
<p>14. $\frac{-5}{3} < x < 5$ $(\frac{-5}{3}, 5)$</p> 	<p>15. $-6 < x < -2$ $(-6, -2)$</p> 

Absolute Value Equations and Inequalities - Key

<p>16.</p> $\frac{-9}{2} \leq x \leq \frac{-5}{2}$ $\left[\frac{-9}{2}, \frac{-5}{2} \right]$ 	<p>17.</p> $-2 < x < \frac{-4}{5}$ $\left(-2, \frac{-4}{5} \right)$ 
<p>18. No Solution</p>	

In problems 19-23, solve each absolute value inequality. Graph the solution set on a real number line.

<p>19.</p> $x < -2 \text{ or } x > 18$ $(-\infty, -2) \cup (18, \infty)$ 	<p>20.</p> $x \leq -2 \text{ or } x \geq 2$ $(-\infty, -2] \cup [2, \infty)$ 
<p>21. $(-\infty, \infty)$</p> 	<p>22.</p> $x \leq \frac{-8}{9} \text{ or } x \geq \frac{16}{9}$ $\left(-\infty, \frac{-8}{9} \right] \cup \left[\frac{16}{9}, \infty \right)$ 

Absolute Value Equations and Inequalities - Key

23.

$$x < \frac{16}{3} \quad \text{or} \quad x > \frac{26}{3}$$

$$\left(-\infty, \frac{16}{3}\right) \cup \left(\frac{26}{3}, \infty\right)$$

