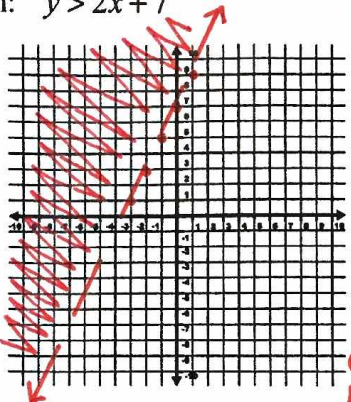
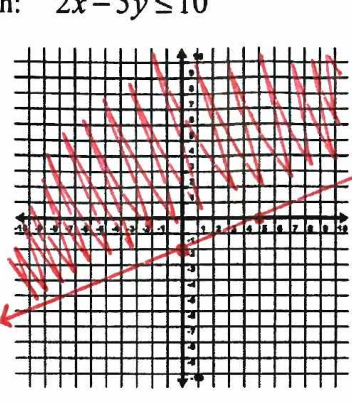
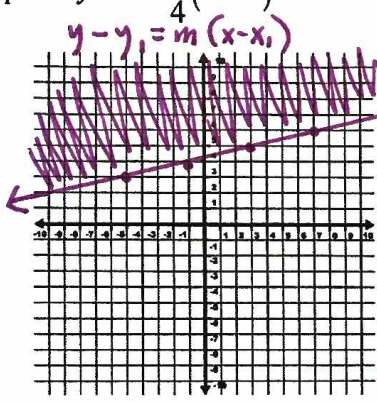
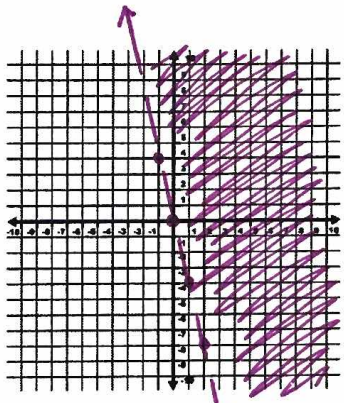
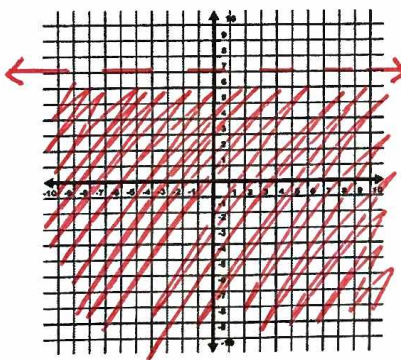
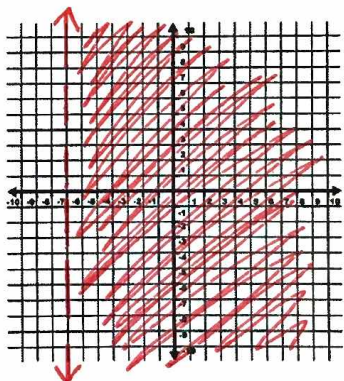
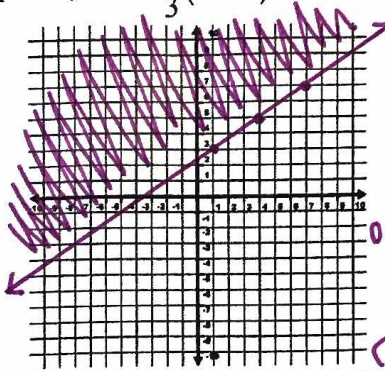
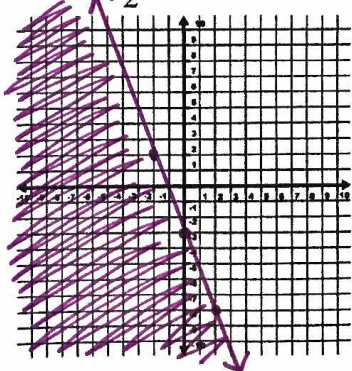


# AA PREP: GRAPHING LINEAR INEQUALITIES—WORKSHEET #1

KEY

Graph each linear inequality. Shade the appropriate solution region.

<p>1. Graph: <math>y &gt; 2x + 7</math></p>  <p style="color: red;">DOTTED LINE SHADE ABOVE</p> <p style="color: red;">CHECK (0,0) SHOULD BE FALSE <math>0 &gt; 2(0) + 7</math> <math>0 &gt; 7</math> FALSE ✓ (0,0) is <u>NOT</u> IN SOLUTION REGION</p>	<p>2. Graph: <math>2x - 5y \leq 10</math></p>  <p style="color: red;">SOLID LINE INTERCEPTS (5,0) AND (0,-2)</p> <p style="color: red;">CHECK (0,0) <math>2(0) - 5(0) \leq 10</math> <math>0 \leq 10</math> TRUE ✓ (0,0) IS IN SOLUTION REGION</p>
<p>3. Graph: <math>y - 3 \geq \frac{1}{4}(x + 5)</math></p> <p style="color: purple;"><math>y - y_1 = m(x - x_1)</math></p>  <p style="color: purple;">SOLID LINE SHADE ABOVE</p> <p style="color: purple;">CHECK (0,0) SHOULD BE FALSE <math>0 - 3 \geq \frac{1}{4}(0 + 5)</math> <math>-3 \geq \frac{5}{4}</math> FALSE! (0,0) IS <u>NOT</u> IN SOLUTION REGION</p>	<p>4. Graph: <math>y &gt; -4x</math></p>  <p style="color: purple;">DOTTED LINE SHADE ABOVE</p> <p style="color: purple;">CHECK (0,4) SHOULD BE TRUE <math>4 &gt; -4(0)</math> <math>4 &gt; 0</math> TRUE ✓ (0,4) IS IN SOLUTION REGION</p>
<p>5. Graph: <math>y &lt; 7</math></p>  <p style="color: red;">DOTTED LINE HORIZONTAL SHADE BELOW</p>	<p>6. Graph: <math>x &gt; -7</math></p>  <p style="color: red;">DOTTED LINE VERTICAL SHADE RIGHT</p>
<p>7. Graph: <math>y - 5 \geq \frac{2}{3}(x - 4)</math></p>  <p style="color: purple;">SOLID LINE SHADE ABOVE</p> <p style="color: purple;">CHECK (0,0) SHOULD BE FALSE <math>0 - 5 \geq \frac{2}{3}(0 - 4)</math> <math>-5 \geq -\frac{8}{3}</math> FALSE! (0,0) IS <u>NOT</u> IN SOLUTION REGION</p>	<p>8. Graph: <math>y \leq -\frac{5}{2}x - 3</math></p>  <p style="color: purple;">SOLID LINE SHADE BELOW</p> <p style="color: purple;">CHECK (0,0) SHOULD BE FALSE <math>0 \leq -\frac{5}{2}(0) - 3</math> <math>0 \leq -3</math> FALSE! (0,0) IS <u>NOT</u> IN SOLUTION REGION</p>