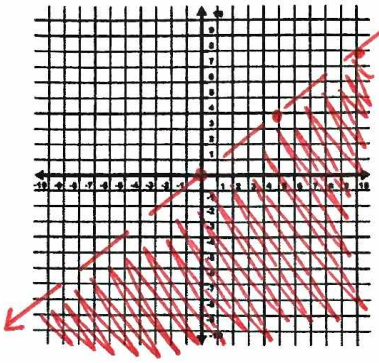
AA PREP: GRAPHING LINEAR INEQUALITIES—WORKSHEET #2

KEY

Graph each linear inequality. Shade the appropriate solution region.

1. Graph: $y < \frac{4}{5}x$



DOTTED LINE

SHADE BELOW

CHECK (0,-4) SHOULD BE TRUE

$-4 < \frac{4}{5}(0)$

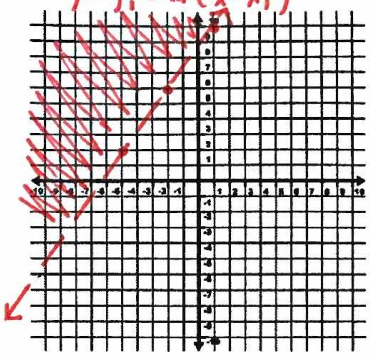
$-4 < 0$

TRUE!

(0,-4) IS IN SOLUTION REGION

2. Graph: $y - 2 > \frac{4}{3}(x+5)$

$y - y_1 = m(x - x_1)$



DOTTED LINE

SHADE ABOVE

CHECK (0,0) SHOULD BE FALSE

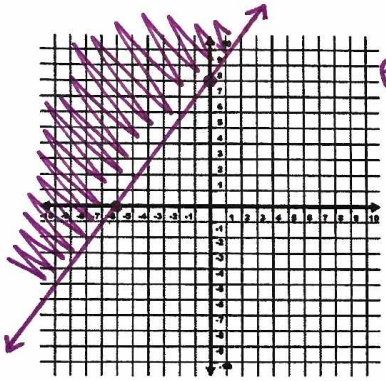
$0 - 2 > \frac{4}{3}(0+5)$

$-2 > \frac{20}{3}$

FALSE!

(0,0) IS NOT IN SOLUTION REGION

3. Graph: $4x - 3y \leq -24$



SOLID LINE

INTERCEPTS (-6,0) AND (0,8)

CHECK (0,0)

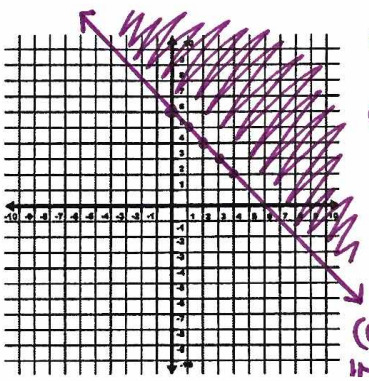
$4(0) - 3(0) \leq -24$

$0 \leq -24$

FALSE!

(0,0) IS NOT IN SOLUTION REGION

4. Graph: $y \geq -x + 6$



SOLID LINE

SHADE ABOVE

CHECK (0,0) SHOULD BE FALSE

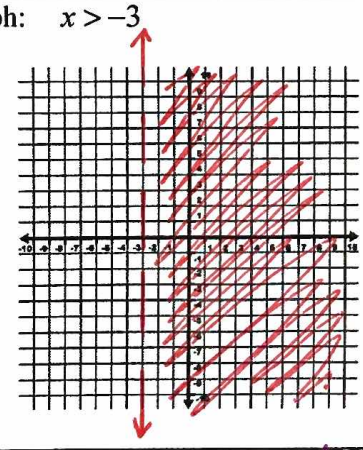
$0 \geq -(0) + 6$

$0 \geq 6$

FALSE!

(0,0) IS NOT IN SOLUTION REGION

5. Graph: $x > -3$

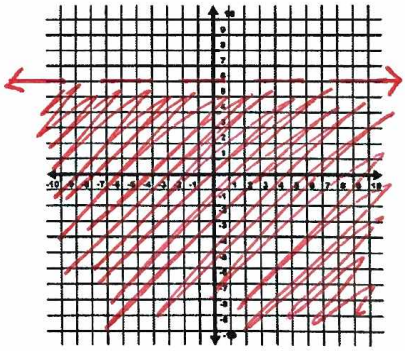


DOTTED LINE

VERTICAL LINE

SHADE RIGHT

6. Graph: $y < 6$



DOTTED LINE

HORIZONTAL LINE

SHADE BELOW

7. Graph: $x \leq 5y$

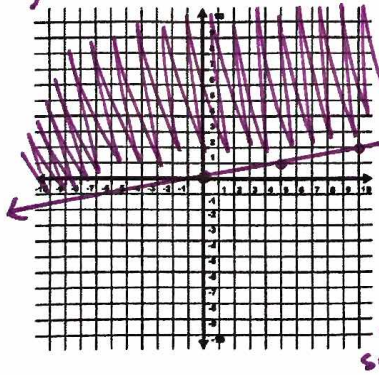
ISOLATE y

$\frac{x}{5} \leq \frac{5y}{5}$

$y \geq \frac{x}{5}$

SOLID LINE

$y \geq \frac{1}{5}x$



SHADE ABOVE

CHECK (0,4) SHOULD BE TRUE

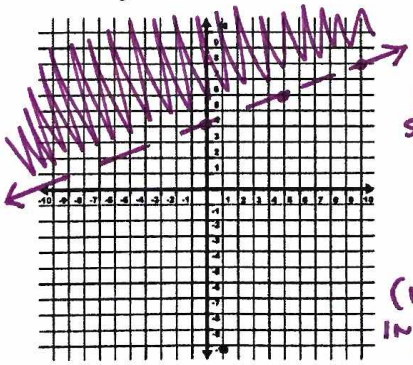
$0 \leq 5(4)$

$0 \leq 20$

TRUE!

(0,4) IS IN SOLUTION REGION

8. Graph: $y > \frac{2}{5}x + 4$



DOTTED LINE

SHADE ABOVE

CHECK (0,0) SHOULD BE FALSE

$0 > \frac{2}{5}(0) + 4$

$0 > 4$

FALSE!

(0,0) IS NOT IN SOLUTION REGION