1 Boyle's Law involves the pressure and volume of gas in a container. It can be represented by the formula $P_1V_1 = P_2V_2$. When the formula is solved for P_2, the result is

1 $P_1V_1V_2$

2 $\frac{V_2}{P_1V_1}$

3 $\frac{P_1V_1}{V_2}$

4 $\frac{P_1V_2}{V_1}$

$\frac{V_2}{V_2}$

$\frac{P_1V_1}{V_2} = P_2$

2 When $3x + 2 \leq 5(x - 4)$ is solved for x, the solution is

1 $x \leq 3$
2 $x \geq 3$
3 $x \leq -11$
4 $x \geq 11$

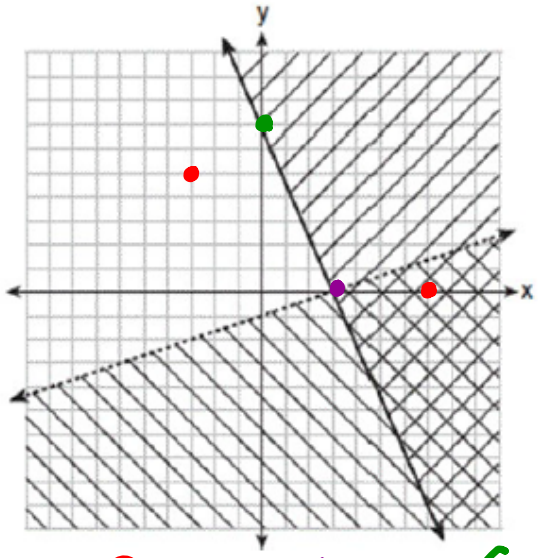
$3x+2 \leq 5x-20$
$-5x \quad -5x$
$-2x+2 \leq -20$
$-2 \quad -2$
$\frac{-2x}{-2} \leq \frac{-22}{-2}$
$x \geq 11$

3 The cost of a pack of chewing gum in a vending machine is $0.75. The cost of a bottle of juice in the same machine is $1.25. Julia has $22.00 to spend on chewing gum and bottles of juice for her team and she must buy seven packs of chewing gum. If b represents the number of bottles of juice, which inequality represents the maximum number of bottles she can buy?

1 $0.75b + 1.25(7) \geq 22$
2 $0.75b + 1.25(7) \leq 22$
3 $0.75(7) + 1.25b \geq 22$
4 $0.75(7) + 1.25b \leq 22$

$.75(7) + 1.25b \leq 22$

4 What is one point that lies in the solution set of the system of inequalities graphed below?



1 (7,0) 2 (5,0) 3 (0,7) 4 (-3,5)

5 Given: $A = \{18, 6, -3, -12\}$

Determine all elements of set A that are in the solution of the inequality $\frac{2}{3}x + 3 < -2x - 7$.

1 $\{-3, 6, 18\}$
2 $\{6, 18\}$
3 $\{-3, -12\}$
4 $\{-12\}$

$\frac{2}{3} + 2$

$= \frac{2}{3} + \frac{6}{3}$

$= \frac{8}{3}$

$-2x \quad +2x$

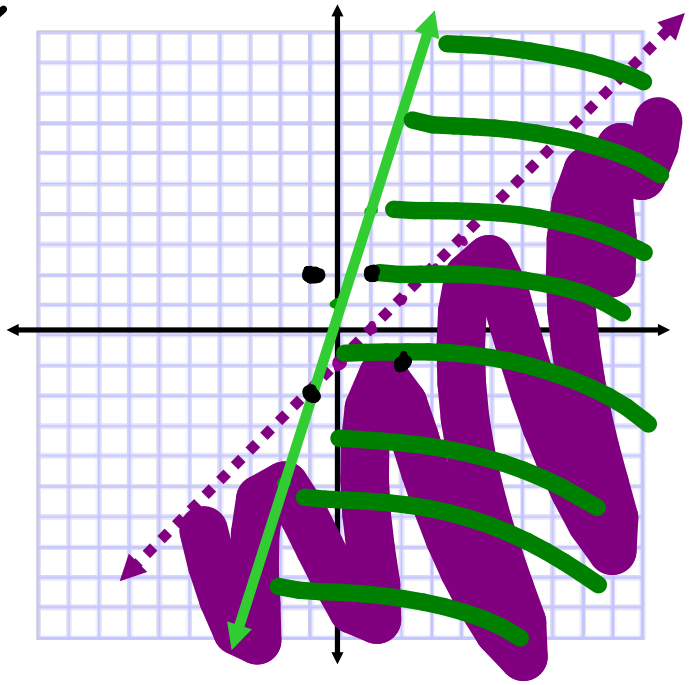
$\frac{8}{3}x + 3 < -7$

$\frac{3}{8}\frac{8}{3}x < -10 \cdot \frac{3}{8}$

$x < \frac{-30}{8} = -3.75$

6 Which ordered pair is in the solution set of the system of inequalities $y \leq 3x + 1$ and $x - y > 1$?

1 $(-1,-2)$
2 $(2,-1)$ ✔
3 $(1,2)$
4 $(-1,2)$



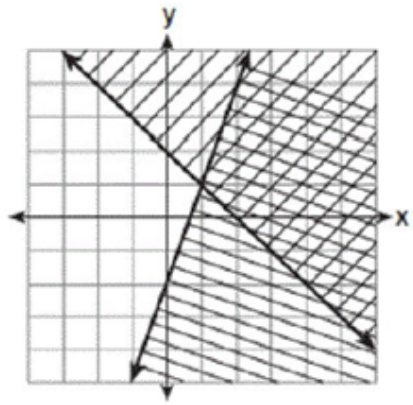
$-y > -x + 1$

$y < x - 1$

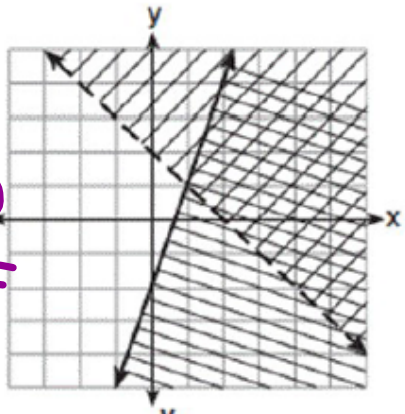
7 Given: $y + x > 2$
$y \leq 3x - 2$

Which graph shows the solution of the given set of inequalities?

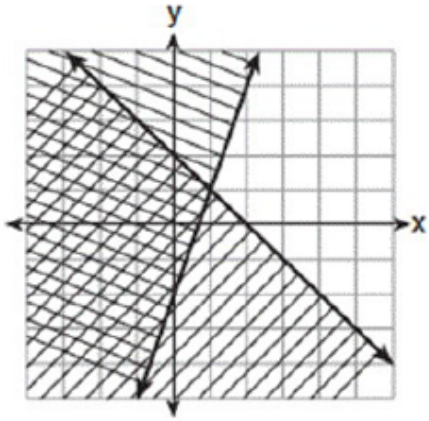
1



2



3



4