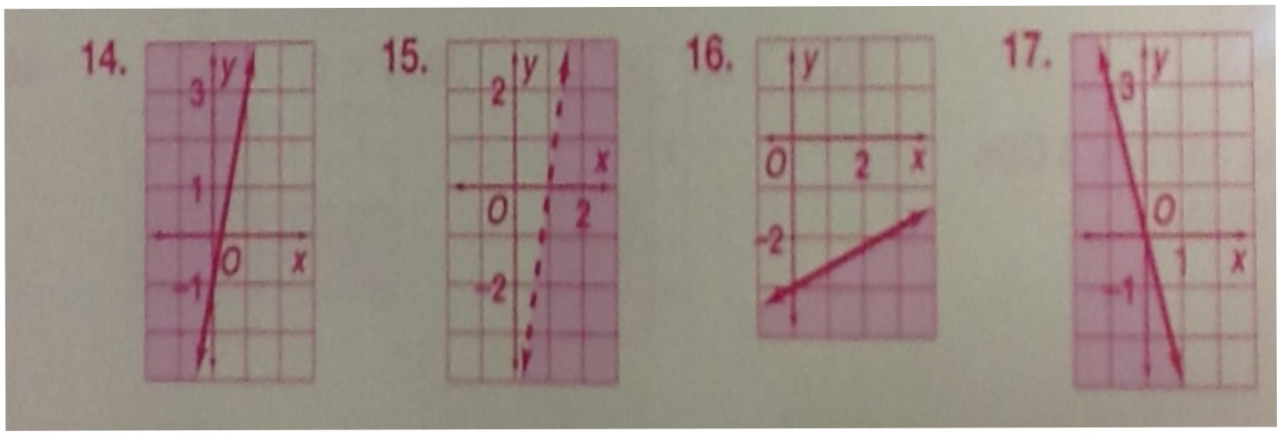
## Lesson 6-6A - Systems of Linear Inequalities

Due Today: **p. 305 #2-8 even; #14-17 all.**

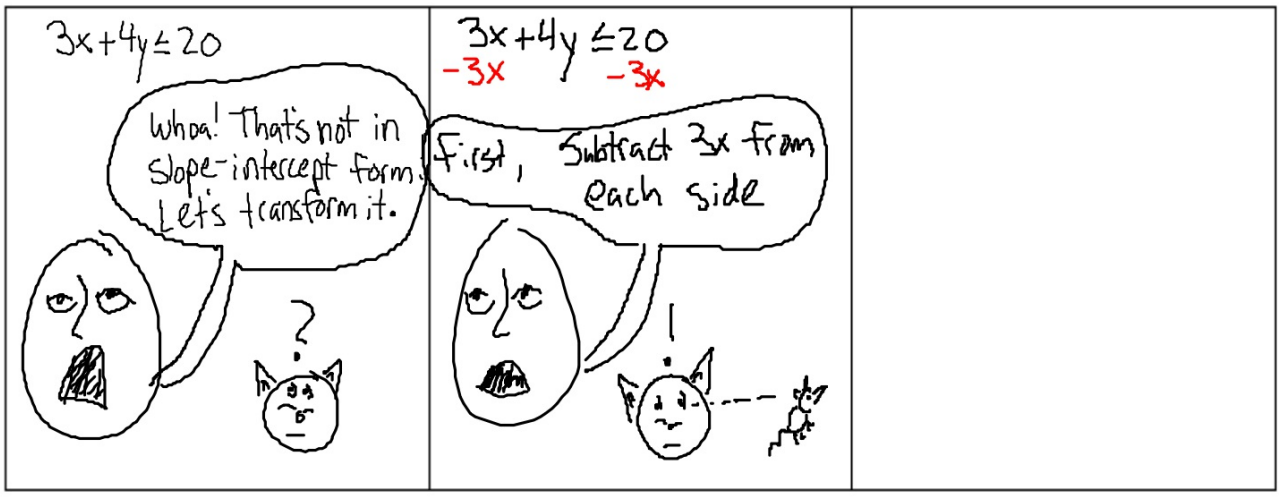
2) Yes
4) Yes
6) Yes
8) B




**Due Friday: p.312 #1-11 odds.**

# Comic Strip for $3x + 4y \leq 20$

**Directions:** Draw a comic strip that shows **every step** in the process of graphing the equation **$3x + 4y \leq 20$**. The last panel should show the completed graph. Note: you don't need to use all nine blank panels, but you need to show every part of the process.



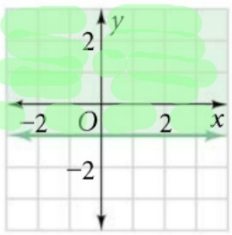
**Determine whether point $P$ is a solution of the linear inequality.**

**1.** $y \leq -2x + 1; P(2, 2)$ **2.** $x < 2; P(1, 0)$ **3.** $y \geq 3x - 2; P(0, 0)$

**4.** $y > x - 1; P(0, 1)$ **5.** $y \geq -\frac{2}{5}x + 4; P(0, 0)$ **6.** $y > \frac{5}{3}x - 4; P(0, 1)$

**Choose the linear inequality that describes each graph.**

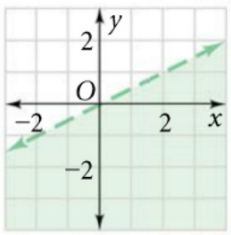
**7.**




**A.** $y \geq -1$

**B.** $y \leq -1$

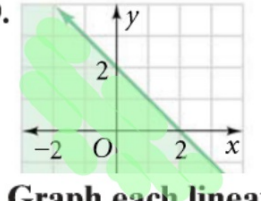
**8.**




**A.** $y > \frac{1}{2}x$

**B.** $y < \frac{1}{2}x$

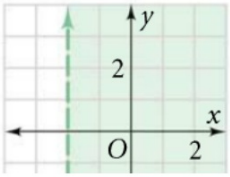
**9.**




**A.** $y \geq -x + 2$

**B.** $y \leq -x + 2$

**10.**




**A.** $x > -2$

**B.** $x < -2$

**Graph each linear inequality.**

**11.** $y \leq \frac{1}{4}x - 1$ **12.** $y \geq \frac{1}{4}x - 1$ **13.** $y < -4x - 1$ **14.** $y \geq 4x - 1$

**15.** $y < 5x - 5$ **16.** $y \leq \frac{2}{5}x - 3$ **17.** $y \leq -3x$ **18.** $y \geq -\frac{1}{2}x$

**Write each linear inequality in slope-intercept form. Then graph the inequality.**

**19.** $2x - 3y \geq 7$ **20.** $5x - 3y \leq 6$ **21.** $4x - 6y \geq 16$ **22.** $-4y - 6x > 8$

1) Graph the linear inequality.

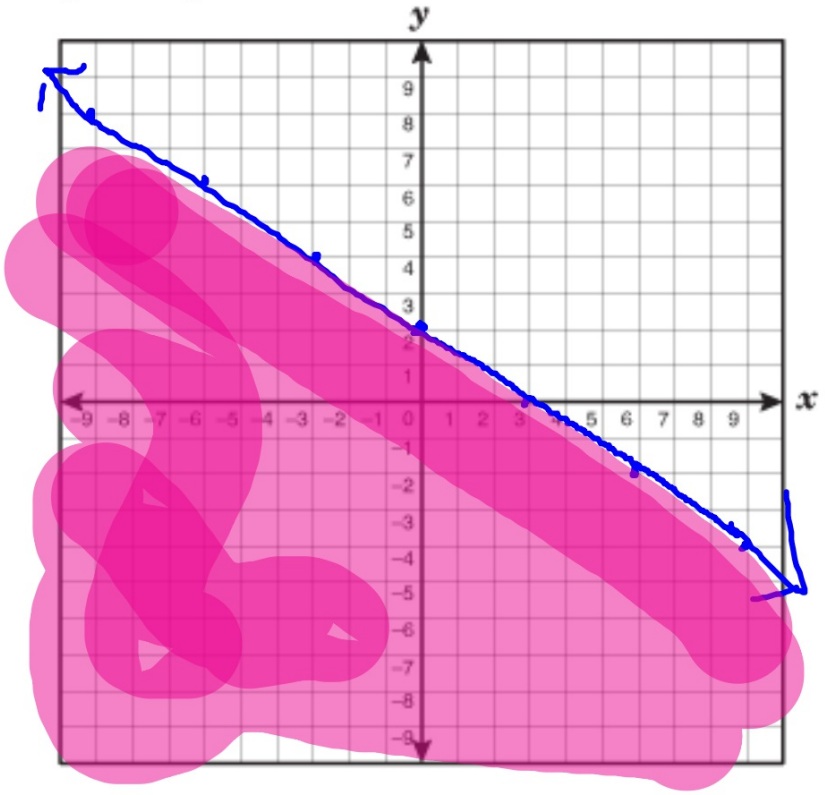
$$2x + 3y \leq 6$$

$-2x \quad -2x$

$3y \leq -2x + 6$

$\div 3 \quad \div 3 \quad \div 3$

$y \leq -\frac{2}{3}x + 2$

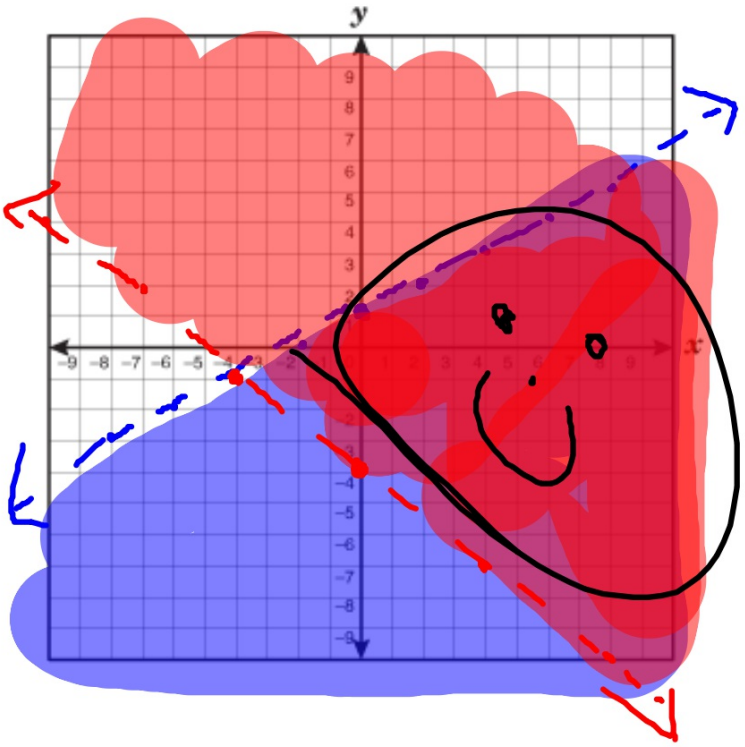


## Lesson 6-6B - Solving Systems of Inequalities

**Graph the two inequalities on the same coordinate plane**

$$y < \frac{1}{2}x + 1$$

$$y > -\frac{3}{4}x - 4$$



x y

Is (-3, -4) a solution to the system of linear inequalties?

$-y < 2x + 4$ ✓ $\quad -4 < 2(-3) + 4 \quad -4 < -2$

$-3x - 2y \geq 6$ ✓

$-3(-3) - 2(-4) \geq 6$

$9 + 8 \geq 6$

$17 \geq 6$