

1. The math department needs to buy new textbooks and laptops for the computer science classroom. The textbooks cost \$116.00 each, and the laptops cost \$439.00 each. If the math department has \$6500 to spend and purchases 30 textbooks, how many laptops can they buy?

1. 6 2. 7
3. 11 4. 12

$$116T + 439C \leq 6500$$

$$116(30) + 439C \leq 6500$$

$$3480 + 439C \leq 6500$$

$$439C \leq 3020$$

$$C \leq \frac{3020}{439}$$

$$C \leq 6.8$$

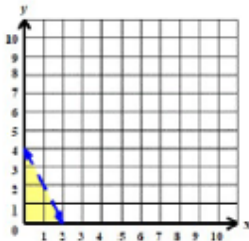
2. In which graph does the shaded region represent the solution set for the inequality shown below?

$$2x - y < 4$$

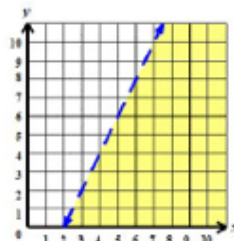


$$-1(-y) < (-2x + 4)(-1)$$

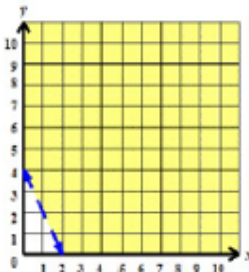
1.



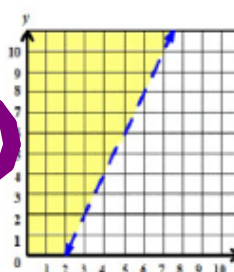
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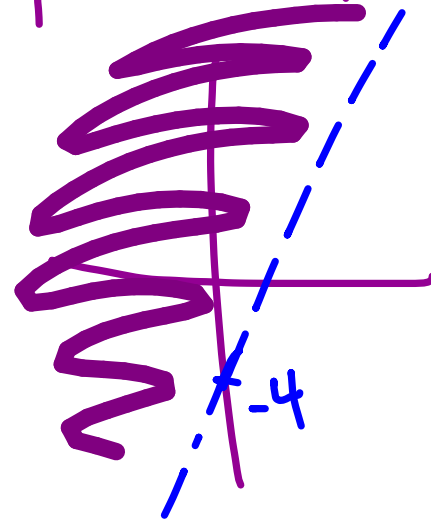
2.



4.



$$y > 2x - 4$$



3. Joy wants to buy strawberries and raspberries to bring to a party. Strawberries cost \$1.60 per pound and raspberries cost \$1.75 per pound. If she only has \$10 to spend on berries, which inequality represents the situation where she buys x pounds of strawberries and y pounds of raspberries?

1. $1.60x + 1.75y \leq 10$

2. $1.60x + 1.75y \geq 10$

3. $1.75x + 1.60y \leq 10$

4. $1.75x + 1.60y \geq 10$

$$1.6x + 1.75y \leq 10$$

4. What is the solution to the inequality $2 + \frac{4}{9}x \geq 4 +$

x ?

1. $x \leq -\frac{18}{5}$

2. $x \geq -\frac{18}{5}$

3. $x \leq \frac{54}{5}$

4. $x \geq \frac{54}{5}$

$$2 + \frac{4}{9}x \geq 4 + x$$

$$\begin{array}{r} -x \\ \hline \end{array}$$

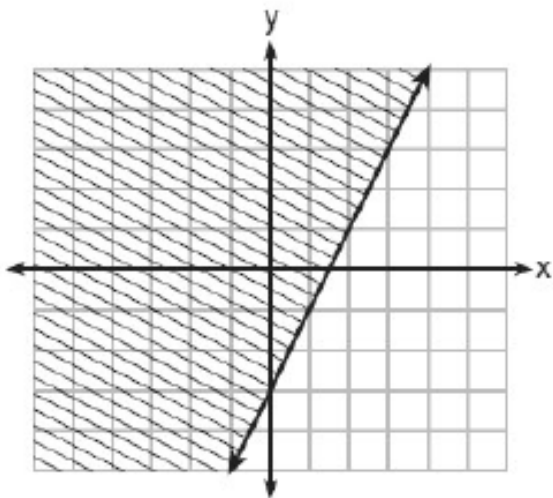
$$2 - \frac{5}{9}x \geq 4$$

$$\begin{array}{r} -2 \\ \hline \end{array}$$

$$-\frac{9}{5} \left(-\frac{5}{9}x \right) \geq (2) \left(-\frac{9}{5} \right)$$

$$x \leq -\frac{18}{5}$$

5. Which inequality is represented by the graph below?



1. $y \leq 2x - 3$
- 2. $y \geq 2x - 3$
3. $y \leq -3x + 2$
- 4. $y \geq -3x + 2$

6. What is the solution of $4x - 30 \geq -3x + 12$?

1. $x \geq 6$ 2. $x \leq 6$
3. $x \geq -6$ 4. $x \leq -6$

$$\begin{array}{r} 7x - 30 \geq +12 \\ +30 \quad +30 \\ \hline 7x \geq 42 \\ x \geq 6 \end{array}$$

7. Which ordered pair is *not* in the solution set of $y > 2x + 1$?

1. (1,4)

2. (1,6)

3. (3,8)

4. (2,5)

