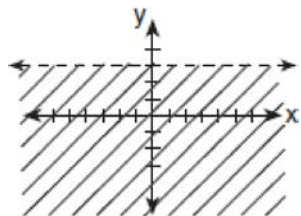
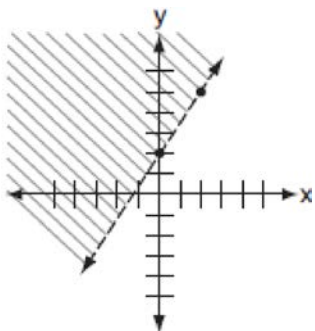


### A.G.6: Linear Inequalities 1: Graph linear inequalities

- 1 Which inequality is represented by the accompanying graph?

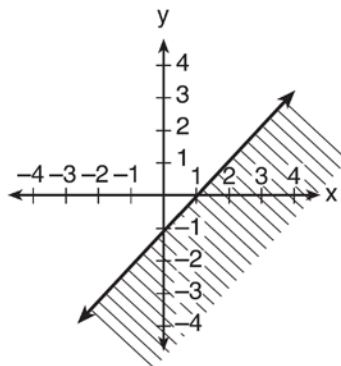


- 1)  $y < 3$
  - 2)  $y > 3$
  - 3)  $y \leq 3$
  - 4)  $y \geq 3$
- 2 Which inequality is shown in the accompanying diagram?

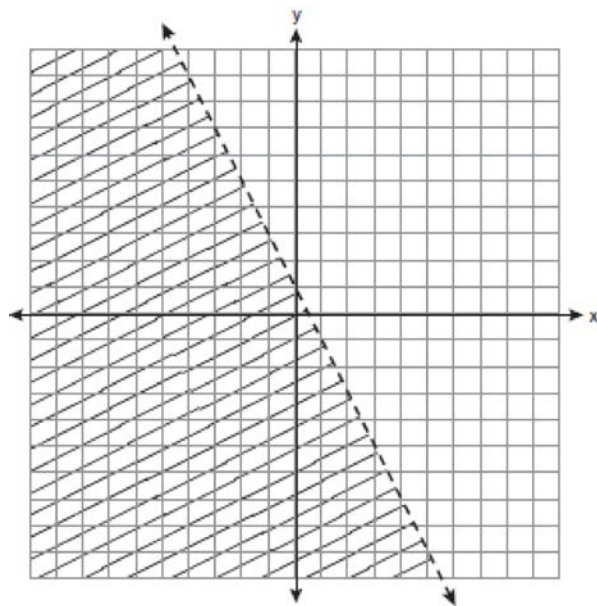


- 1)  $y > \frac{3}{2}x + 2$
- 2)  $y < \frac{3}{2}x + 2$
- 3)  $y \geq \frac{3}{2}x + 2$
- 4)  $y \leq \frac{3}{2}x + 2$

- 3 The diagram below shows the graph of which inequality?

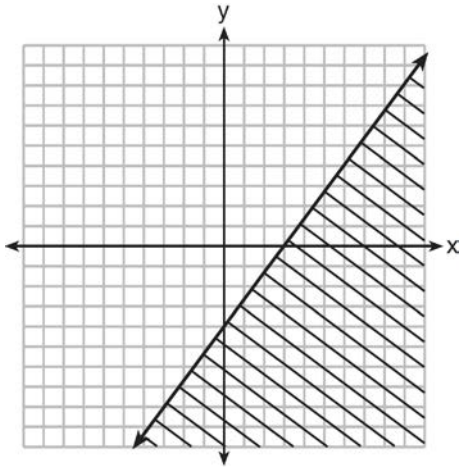


- 1)  $y > x - 1$
  - 2)  $y \geq x - 1$
  - 3)  $y < x - 1$
  - 4)  $y \leq x - 1$
- 4 Which inequality is represented by the graph below?



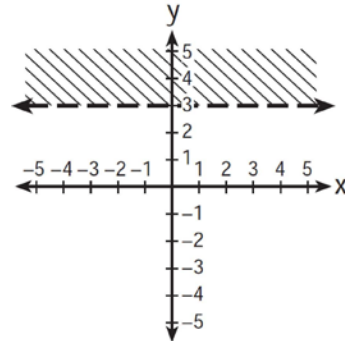
- 1)  $y < 2x + 1$
- 2)  $y < -2x + 1$
- 3)  $y < \frac{1}{2}x + 1$
- 4)  $y < -\frac{1}{2}x + 1$

5 Which inequality is shown in the graph below?

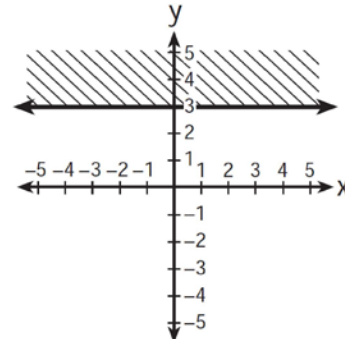


- 1)  $y \leq \frac{4}{3}x + 3$
- 2)  $y \geq \frac{4}{3}x + 3$
- 3)  $y \leq \frac{4}{3}x - 4$
- 4)  $y \geq \frac{4}{3}x - 4$

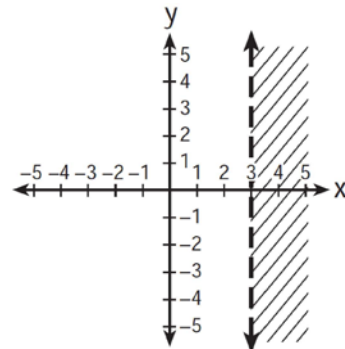
6 Which graph represents the inequality  $y > 3$ ?



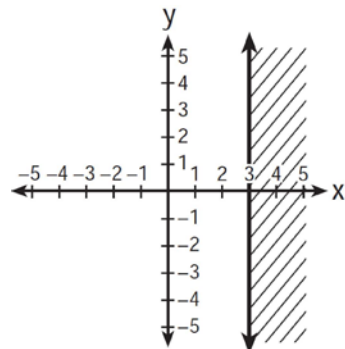
1)



2)

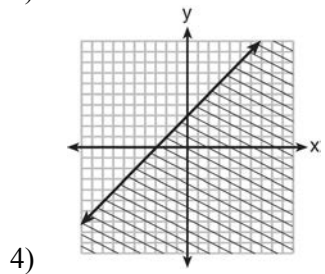
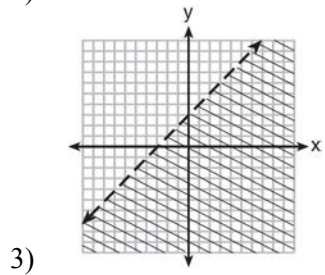
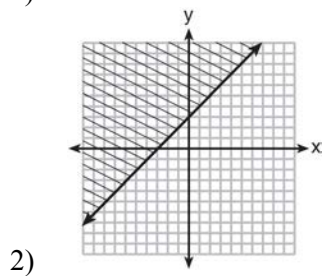
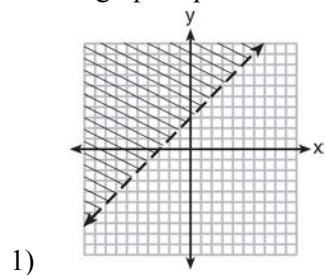


3)

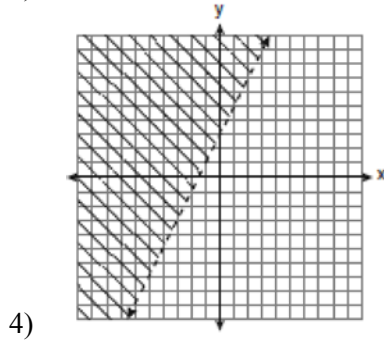
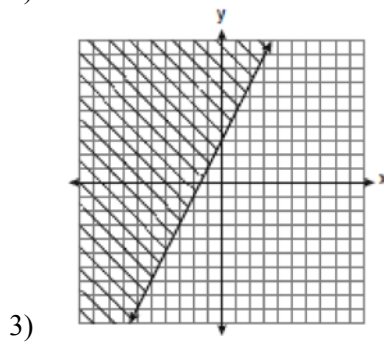
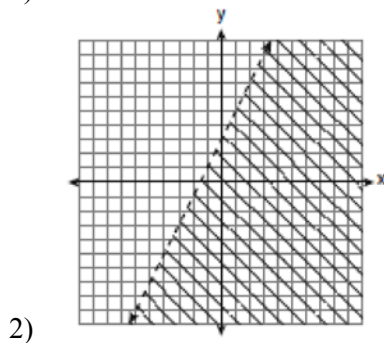
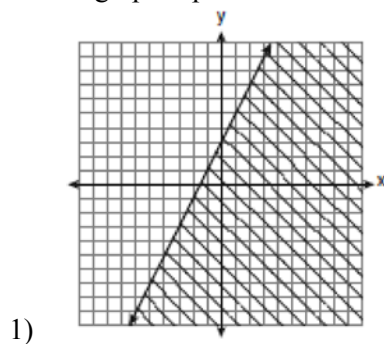


4)

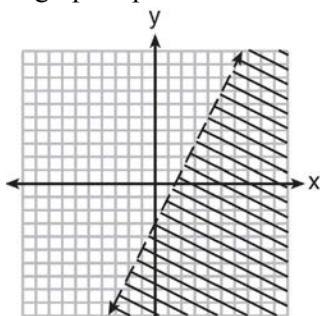
7 Which graph represents the inequality  $y \geq x + 3$ ?



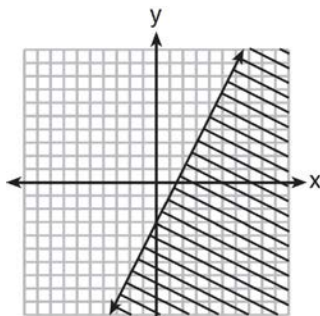
8 Which graph represents the solution of  $3y - 9 \leq 6x$ ?



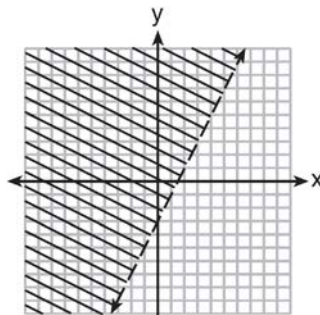
- 9 Which graph represents the solution of  $2y + 6 > 4x$ ?



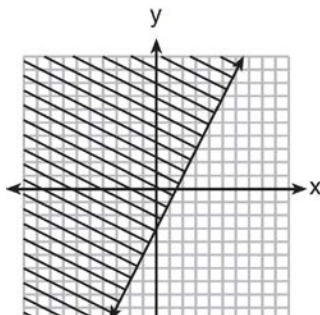
1)



2)



3)



4)

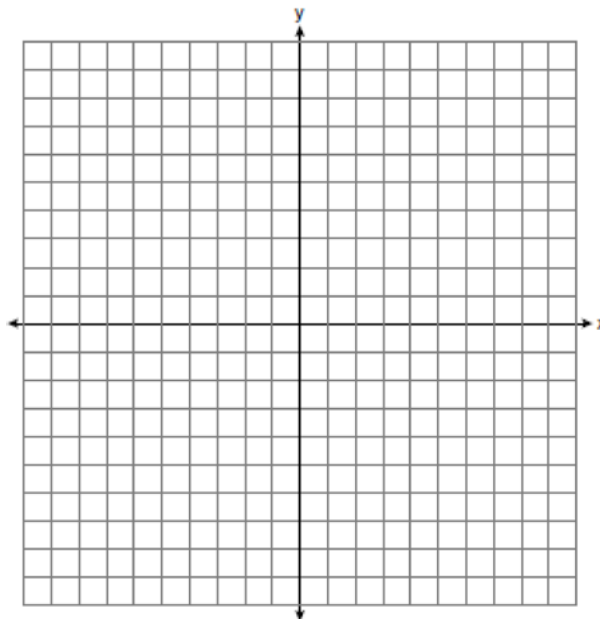
- 10 Which quadrant will be completely shaded in the graph of the inequality  $y \leq 2x$ ?

- 1) Quadrant I
- 2) Quadrant II
- 3) Quadrant III
- 4) Quadrant IV

- 11 In the graph of  $y \leq -x$ , which quadrant is completely shaded?

- 1) I
- 2) II
- 3) III
- 4) IV

- 12 Graph the solution set for the inequality  $4x - 3y > 9$  on the set of axes below. Determine if the point  $(1, -3)$  is in the solution set. Justify your answer.



# **A.G.6: Linear Inequalities 1: Graph linear inequalities** **Answer Section**

1 ANS: 1 REF: 010629a

2 ANS: 1 REF: 010828a

3 ANS: 4 REF: 061320ia

4 ANS: 2

The slope of the inequality is  $-\frac{1}{2}$ .

REF: fall0720ia

5 ANS: 3 REF: 061505ia

6 ANS: 1 REF: 011210ia

7 ANS: 2 REF: 081314ia

8 ANS: 1 REF: 060920ia

9 ANS: 3

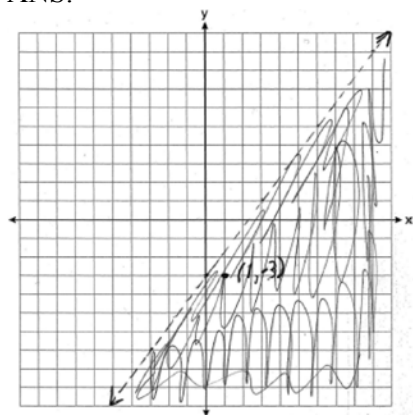
$$y > 2x - 3$$

REF: 011422ia

10 ANS: 4 REF: 061028ia

11 ANS: 3 REF: 080220a

12 ANS:



(1, -3) is in the solution set.  $4(1) - 3(-3) > 9$

$$4 + 9 > 9$$

REF: 011038ia