MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find an equation of the line that satisfies the conditions. Write the equation in standard form.

1) (-5, 1) and (0, 8)
   A) -7x - 5y = -40  B) -6x - 8y = -64  C) 7x - 5y = -40  D) 6x + 8y = -64

2) (10, 9) and (10, 1)
   A) x = 10  B) x + y = 11  C) x + y = 19  D) y = 9

3) (-2, 6) and (-1, 6)
   A) -2x - y = 0  B) y = 6  C) x = -2  D) -x - 2y = 0

4) (4, -2) and (0, 3)
   A) -6x + 3y = -9  B) 6x - 3y = -9  C) 5x + 4y = 12  D) -5x + 4y = 12

Find an equation of the line passing through the two points. Write the equation in standard form.

5) Through (0, 4); m = \(-\frac{8}{9}\)
   A) 8x - 9y = 36  B) 8x + 9y = -36  C) 8x + 9y = 36  D) 9x + 8y = -36

6) Through (6, -7); horizontal
   A) x = 7  B) x = 6  C) y = -7  D) y = -6

7) Through (-6, 3); undefined slope
   A) y = 3  B) y = -6  C) x = -6  D) x = 3

Find an equation of the line satisfying the conditions. Write the equation in slope-intercept form.

8) Through (-6, 7); parallel to 3x + 7y = 3
   A) y = \frac{3}{7}x - \frac{31}{7}  B) y = -\frac{7}{3}x + \frac{7}{3}  C) y = -\frac{3}{7}x + \frac{31}{7}  D) y = \frac{3}{7}x + \frac{3}{7}

9) Through (-5, -2); perpendicular to -5x - 2y = 27
   A) y = \frac{5}{2}x + \frac{21}{2}  B) y = \frac{2}{5}x  C) y = -\frac{5}{2}x - \frac{29}{2}  D) y = -\frac{2}{5}x - 4

10) Through (1, 9); perpendicular to x = 5
    A) y = -1  B) y = -9  C) y = 9  D) y = 1

11) Through (-6, 5); parallel to -7x + 5y = 57
    A) y = \frac{5}{7}x + \frac{30}{7}  B) y = -\frac{5}{7}x - \frac{30}{7}  C) y = -\frac{7}{5}x - \frac{67}{5}  D) y = \frac{7}{5}x + \frac{67}{5}
Write the equation in slope-intercept form.

12) $9x + 5y = 5$
   - $y = 9x - 5$
   - $y = \frac{9}{5}x - 1$
   - $y = -\frac{9}{5}x + 1$
   - $y = \frac{9}{5}x + 1$

13) $3x - 10y = -6$
   - $y = 3x + 11$
   - $y = -\frac{3}{10}x + \frac{3}{5}$
   - $y = \frac{10}{3}x - 2$
   - $y = \frac{3}{10}x + \frac{3}{5}$

Graph the line described.

14) Through (0, 4); $m = \frac{1}{4}$
15) Through (10, 0); \( m = -\frac{1}{5} \)
16) Undefined slope; through (1, 9)

A)

B)

C)

D)
Graph the linear inequality in two variables.

17) \(5x + y \leq 1\)
18) \[ x + 4y \geq 6 \]
19) $x \geq 4$
20) $y < -2$