Check Your Understanding – Algebra and Graphing Lines

The table below identifies the key concepts from this unit.

1. Check your understanding by completing these questions.
2. Check your answers in the key provided.
3. In the table below, highlight the questions you got correct.
4. Ask peers/Dr. James about concepts where you can improve.

Key Concepts	Basic Questions	Intermediate Questions	Advanced Questions
Solve algebraic equations	1, 2	3	4
Identify slope of a line	5	6	7
Identify y-intercept of a line	8	9	10
Graph a line	11	12, 13, 14	15, 16

1) Solve for x:

$$x - 6 = 10$$

2) Solve for x:

$$18 = \frac{x}{4}$$

3) Solve for x:

$$8 + \frac{x}{7} = 43$$

4) Solve for x:

$$\frac{18x + 3}{6} = 5x - 2$$

5) Find the slope:

$$y = \frac{2}{3}x - 10$$

6) Find the slope:

$$3x + 4y = 12$$

7) Find the slope:

$$y = 4$$

8) Find the y-intercept:

$$y = \frac{2}{3}x - 10$$

9) Find the y-intercept:

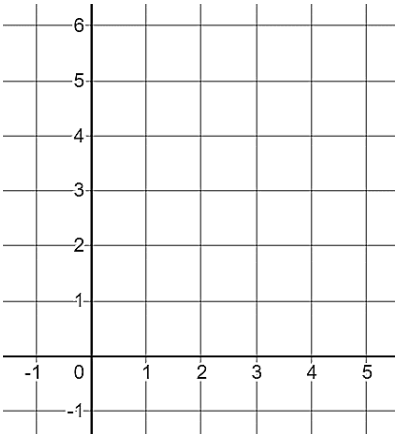
$$3x + 4y = 12$$

10) Find the y-intercept:

$$x = 8$$

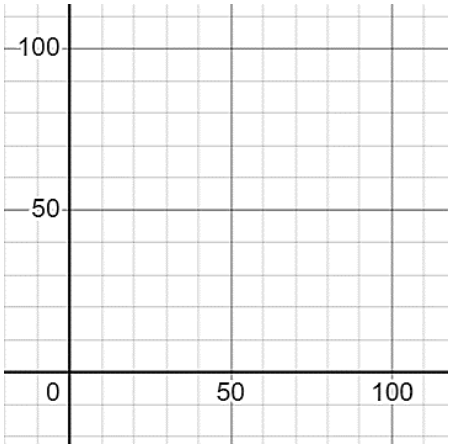
11) Graph the following line:

$$y = \frac{1}{2}x + 4$$

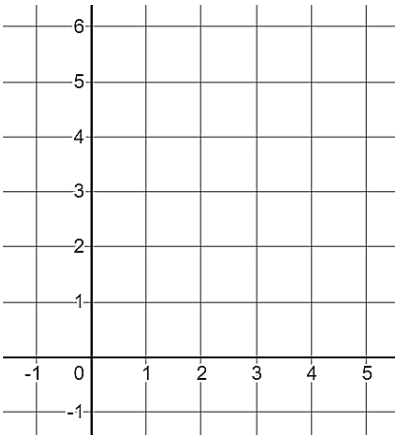


12) Graph the following line:

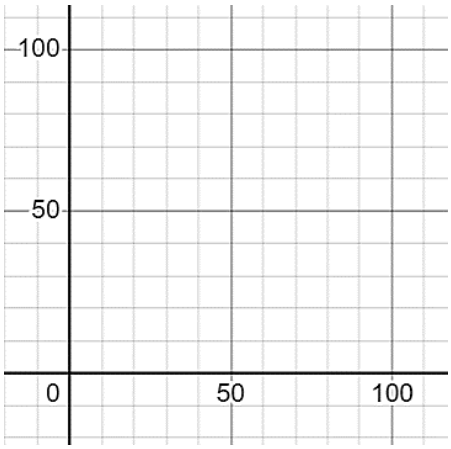
$$x + y = 80$$



13) Graph the line $x = 4$

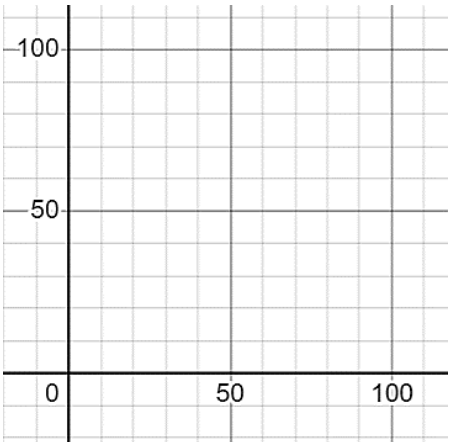


14) Graph the line $y = 80$



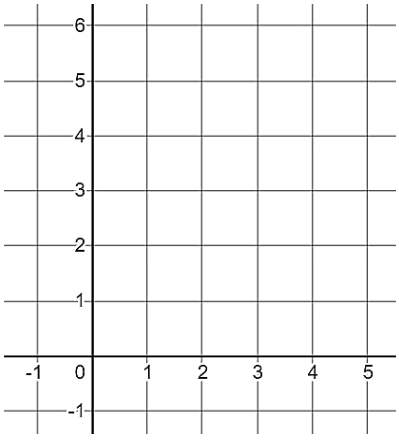
15) Graph the following line:

$$x = \frac{1}{2}y$$



16) Graph the following line:

$$4x + 6y = 36$$



Answers

1) $x = 16$

2) $x = 72$

3) $x = 245$

4) $x = 1.25$

5) $slope = \frac{2}{3}$

6) $slope = -\frac{3}{4}$

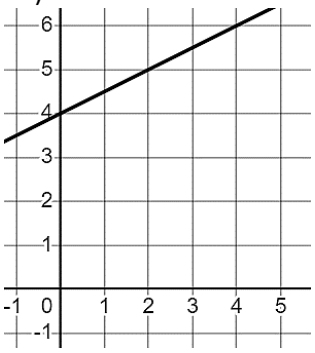
7) $slope = 0$

8) $y - intercept = -10$

9) $y - intercept = 3$

10) $no\ y - intercept$

11)



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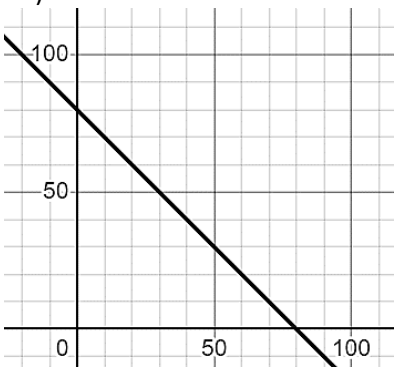

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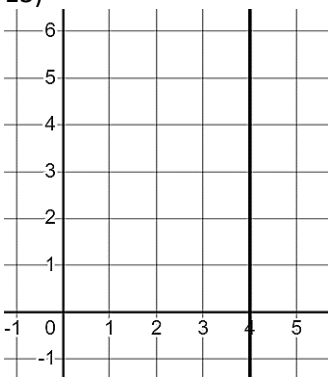

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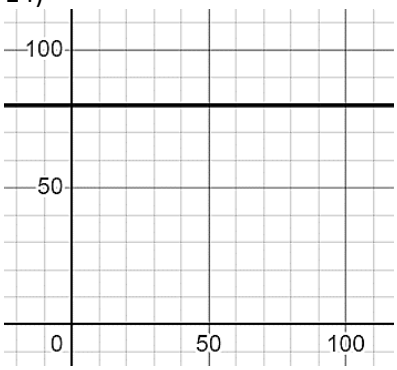

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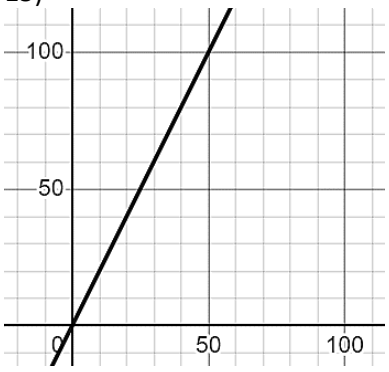

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