



**THIRD SPACE
LEARNING**

Linear Equations Worksheet

Algebra

Grades 6 to 8

Skill Questions

Name:

Date:

- 1 Solve for x
 $2x + 3 = 11$

Answer

- 2 Write the equation of a line in slope-intercept form that passes through the point (3,2) and has a y-intercept of -1 .

Answer

- 3 Determine the slope of the line represented by the equation $4y = 8x - 6$

Answer

- 4 Find the y-intercept of the line $y = -3x + 9$

Answer

- 5 Solve for x
 $3x - 7 = 11$

Answer

Linear Equations | Grades 6 to 8

- 6 Determine if the point (2,5) lies on the line $y = 2x - 1$

Answer

- 7 Solve for y
 $2y - 5 = 3$

Answer

- 8 Write the equation of a line in slope-intercept form that passes through the point (1,4) and has a y-intercept of 2.

Answer

- 9 Determine the slope of the line represented by the equation $3y = 6x - 9$

Answer

- 10 Find the x-intercept of the line $2x + 4y = 8$

Answer

Applied Questions

- 11** Emily earns \$15 per hour babysitting, and she already has \$30 saved. Write an equation to represent her total earnings (E) after h hours of babysitting, and find out how much she will have after 5 hours.

Answer

- 12** The cost (C) of renting a kayak is \$20 per hour plus a \$10 equipment fee. Write an equation to represent the total cost for renting the kayak for t hours, and find the total cost for 3 hours.

Answer

- 13** A garden center charges \$5 for each plant plus an initial fee of \$10 for planting services. Write an equation to represent the total cost (C) for planting p plants, and find the total cost for planting 8 plants.

Answer

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- 14** The length of a rectangular garden is 3 feet longer than its width, and the perimeter is 30 feet. Write an equation to represent the perimeter (P) in terms of the width (W) and find the dimensions of the garden.

Answer



- 15** The sum of Mary's age (M) and her brother's age (B) is 36 years. If Mary is 8 years older than her brother, write an equation to represent their ages and find their ages.

Answer



Answers

Question number	Question	Answers	Standard
1	Solve for x $2x + 3 = 11$	$x = 4$	8.EE.C.7
2	Write the equation of a line in slope-intercept form that passes through the point (3,2) and has a y-intercept of -1.	$y = x - 1$	8.EE.C.7
3	Determine the slope of the line represented by the equation $4y = 8x - 6$	Slope = 2	8.EE.C.7
4	Find the y-intercept of the line $y = -3x + 9$	$y = 9$	8.EE.C.7
5	Solve for x $3x - 7 = 11$	$x = 6$	8.EE.C.7
6	Determine if the point (2,5) lies on the line $y = 2x - 1$	No	8.EE.C.7
7	Solve for y $2y - 5 = 3$	$y = 4$	8.EE.C.7
8	Write the equation of a line in slope-intercept form that passes through the point (1,4) and has a y-intercept of 2.	$y = 2x + 2$	8.EE.C.7
9	Determine the slope of the line represented by the equation $3y = 6x - 9$	Slope = 2	8.EE.C.7
10	Find the x-intercept of the line $2x + 4y = 8$	$x = 4$	8.EE.C.7

Linear Equations | Grades 6 to 8 | Answers




Question number	Question	Answers	Standard
11	Emily earns \$15 per hour babysitting, and she already has \$30 saved. Write an equation to represent her total earnings (E) after h hours of babysitting, and find out how much she will have after 5 hours.	$E=15h+30$, After 5 hours, $E = \$105$	8.EE.C.7
12	The cost (C) of renting a kayak is \$20 per hour plus a \$10 equipment fee. Write an equation to represent the total cost for renting the kayak for t hours, and find the total cost for 3 hours.	$C=20t+10$, Total cost for 3 hours: $C = \$70$	8.EE.C.7
13	A garden center charges \$5 for each plant plus an initial fee of \$10 for planting services. Write an equation to represent the total cost (C) for planting p plants, and find the total cost for planting 8 plants.	$C=5p+10$, Total cost for 8 plants: $C = \$50$	8.EE.C.7
14	The length of a rectangular garden is 3 feet longer than its width, and the perimeter is 30 feet. Write an equation to represent the perimeter (P) in terms of the width (W) and find the dimensions of the garden.	$P=2L+2W$, $L=9$ feet, $W=6$ feet	8.EE.C.7
15	The sum of Mary's age (M) and her brother's age (B) is 36 years. If Mary is 8 years older than her brother, write an equation to represent their ages and find their ages.	$M=B+8$, $M=22$ years, $B=14$ years	8.EE.C.7

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