THIRD SPACE LEARNING

Solving Equations Worksheet

Algebra

Grades 6 to 8

Skill Questions

Name: .....

Date: .....

1 Solve for x in the equation $2x + 7 = 15$.

Answer

2 Find the solution to the equation $3(y - 2) = 9$.

Answer

3 Solve the equation $\frac{1}{2}x - 3 = 5$.

Answer

4 Determine the value of m in the equation $4m - 10 = 18$.

Answer

5 Solve for y in the equation $2y + 4 = 10$.

Answer

6 Find the solution to the equation $2(x + 5) = 16$.

Answer

7 Solve the equation $3a - 7 = 20$ for a.

Answer

8 Determine the value of b in the equation $5 - 2b = 11$.

Answer

9 Solve for x in the equation $4x + 6 = 26$.

Answer

10 Find the solution to the equation $2(y - 3) = 10$.

Answer

Applied Questions

11 Sarah has some money saved, and she plans to save $\$25$ each week. Write an equation to represent the total savings (S) after w weeks, and find out how much she will have after saving for 10 weeks.

Answer

12 The cost (C) of a school trip is $\$40$ per student plus a $\$15$ bus fee. Write an equation to represent the total cost for a group of s students, and find the total cost for a group of 8 students.

Answer

13 A company charges $\$10$ per hour for tutoring, and they offer a $\$5$ discount for each hour over 5 hours. Write an equation to represent the total cost (C) for t tutoring hours, and find the total cost for 7 hours.

Answer

14 The perimeter (P) of a rectangle is 30 inches. If the length (L) is 3 inches longer than the width (W), write an equation to represent the perimeter and find the dimensions of the rectangle.

Answer

15 The sum of Mark's age (M) and his sister's age (S) is 24 years. If Mark is 6 years older than his sister, write an equation to represent their ages and find their ages.

Answer

Answers

Question number	Question	Answers	Standard
1	Solve for x in the equation $2x+7=15$	$x = 4$	8.EE.C.7
2	Find the solution to the equation $3(y - 2) = 9$.	$y = 5$	8.EE.C.7
3	Solve the equation $\frac{1}{2}x - 3 = 5$.	$x = 16$	8.EE.C.7
4	Determine the value of m in the equation $4m - 10 = 18$.	$m = 7$	8.EE.C.7
5	Solve for y in the equation $2y + 4 = 10$.	$y = 3$	8.EE.C.7
6	Find the solution to the equation $2(x + 5) = 16$.	$x = 3$	8.EE.C.7
7	Solve the equation $3a-7=20$ for a.	$a = 9$	8.EE.C.7
8	Determine the value of b in the equation $5 - 2b = 11$.	$b = -3$	8.EE.C.7
9	Solve for x in the equation $4x + 6 = 26$.	$x = 5$	8.EE.C.7
10	Find the solution to the equation $2(y - 3) = 10$.	$y = 8$	8.EE.C.7
11	Sarah has some money saved, and she plans to save $\$25$ each week. Write an equation to represent the total savings (S) after w weeks, and find out how much she will have after saving for 10 weeks.	$S = 25w$, After 10 weeks, $S = \$250$	8.EE.C.7

Question number	Question	Answers	Standard
12	The cost (C) of a school trip is $\$40$ per student plus a $\$15$ bus fee. Write an equation to represent the total cost for a group of s students, and find the total cost for a group of 8 students.	$C = 40s + 15$, Total cost for 8 students: $C = \$335$	8.EE.C.7
13	A company charges $\$10$ per hour for tutoring, and they offer a $\$5$ discount for each hour over 5 hours. Write an equation to represent the total cost (C) for t tutoring hours, and find the total cost for 7 hours.	$C = 10t - 5(t - 5)$, Total cost for 7 hours: $C = \$60$	8.EE.C.7
14	The perimeter (P) of a rectangle is 30 inches. If the length (L) is 3 inches longer than the width (W), write an equation to represent the perimeter and find the dimensions of the rectangle.	$P = 2L + 2W$ $L = 9$ inches $W = 6$ inches	8.EE.C.7
15	The sum of Mark's age (M) and his sister's age (S) is 24 years. If Mark is 6 years older than his sister, write an equation to represent their ages and find their ages.	$M = S + 6$, $M = 15$ years, $S = 9$ years	8.EE.C.7

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