



**THIRD SPACE
LEARNING**

Solving Inequalities

Algebra

Grades 6 to 8

Skill Questions

Name:

Date:

1 Solve for u.
 $u + 7 \leq 9$

Answer

2 Solve for g.
 $3g \leq 9$

Answer

3 Solve for k.
 $4k \leq 8$

Answer

4 Solve for p.
 $p + 1 < 1$

Answer

5 Solve for n.
 $n + 2 \geq 3$

Answer

Solving Inequalities | Grades 6 to 8

6 Solve for a.

$$a + 7 < -5$$

Answer

7 Solve for u.

$$4 + 2u < 10$$

Answer

8 Solve for x.

$$6 - 2x > 4$$

Answer

9 Solve for y.

$$3y + 5 \leq 14$$

Answer

10 Solve for b.

$$2b + 1 < 8$$

Answer

Applied Questions

- 11 Mr. Brown is splitting his students into groups to give presentations about novels they read. He wants each group to have 4 students. There are fewer than 24 students in class today, so Mr. Brown can't make as many full groups as he had planned. Let x represent how many full groups Mr. Brown can make. Write an inequality to describe the problem and solve it.

Answer

- 12 Dave went to a game convention to buy packs of trading cards. Each pack cost \$5. To get all of the cards he wanted, he went over his \$20 budget. Let x represent how many packs of trading cards Dave bought. Write an inequality to describe the problem and solve it.

Answer

- 13 Miles read 4 books in the first half of March. By the end of March, the library had added Miles to the top-readers board for reading more than 10 books in a month. Let x represent how many books Miles read in the second half of March. Write an inequality to describe the problem and solve it.

Answer

- 14** Lily is planning a birthday party and wants to buy enough balloons to decorate the venue. Each balloon costs \$0.75, and she has a budget of \$15 for balloons. Write and solve an inequality to determine the maximum number of balloons, b , Lily can buy to stay within her budget.

Answer

- 15** Tom is planting flowers in his garden. He estimates that planting each flower takes him between 5 and 8 minutes. Write a compound inequality to express the time, in minutes, Tom spends planting a single flower.

Answer

Answers

Question number	Question	Answers	Standard
1	Solve for u. $u + 7 \leq 9$	$u \leq 2$	7.EE.B.4b
2	Solve for g. $3g \leq 9$	$g \leq 3$	7.EE.B.4b
3	Solve for k. $4k \leq 8$	$k \leq 2$	7.EE.B.4b
4	Solve for p. $p + 1 < 1$	$p < 0$	7.EE.B.4b
5	Solve for n. $n + 2 \geq 3$	$n \geq 1$	7.EE.B.4b
6	Solve for a. $a + 7 < -5$	$a < -12$	7.EE.B.4b
7	Solve for u. $4 + 2u < 10$	$u < 3$	7.EE.B.4b
8	Solve for x. $6 - 2x > 4$	$x < 1$	7.EE.B.4b
9	Solve for y. $3y + 5 \leq 14$	$y \leq 3$	7.EE.B.4b
10	Solve for b. $2b + 1 < 8$	$b < 3\frac{1}{2}$	7.EE.B.4b

Solving Inequalities | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
11	Mr. Brown is splitting his students into groups to give presentations about novels they read. He wants each group to have 4 students. There are fewer than 24 students in class today, so Mr. Brown can't make as many full groups as he had planned. Let x represent how many full groups Mr. Brown can make. Write an inequality to describe the problem and solve it.	$4x < 24$ $x < 6$	7.EE.B.4b
12	Dave went to a game convention to buy packs of trading cards. Each pack cost \$5. To get all of the cards he wanted, he went over his \$20 budget. Let x represent how many packs of trading cards Dave bought. Write an inequality to describe the problem and solve it.	$5x > 20$ $x > 4$	7.EE.B.4b
13	Miles read 4 books in the first half of March. By the end of March, the library had added Miles to the top-readers board for reading more than 10 books in a month. Let x represent how many books Miles read in the second half of March. Write an inequality to describe the problem and solve it.	$4 + x > 10$ $x > 6$	7.EE.B.4b
14	Lily is planning a birthday party and wants to buy enough balloons to decorate the venue. Each balloon costs \$0.75, and she has a budget of \$15 for balloons. Write and solve an inequality to determine the maximum number of balloons, b , Lily can buy to stay within her budget.	$0.75b \leq 15$ $b \leq 20$	7.EE.B.4b

Solving Inequalities | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
15	Tom is planting flowers in his garden. He estimates that planting each flower takes him between 5 and 8 minutes. Write a compound inequality to express the time, in minutes, Tom spends planting a single flower.	$5 \leq t \leq 8$	7.EE.B.4b

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