LESSON MAKER PRO

Find the Balance

Solve equations and show what the answers mean.

GRADE 6 · 6.A.3.2

6.A.3.2 "Use number sense and properties of operations and equality to model and solve mathematical problems involving equations in the form x + p = q and px = q, where p and q are nonnegative rational numbers. Graph the solution on a number line..."

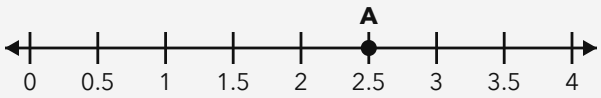
NAME _____ DATE _____

KEEP EQUALITY

To solve x + p = q, subtract p from both sides. To solve px = q, divide both sides by p when p is greater than 0. Check your answer in the equation, then find its place on a number line.

WORKED EXAMPLE

Point A may show the solution to x + 1.25 = 3.75. Solve the equation and check the point.

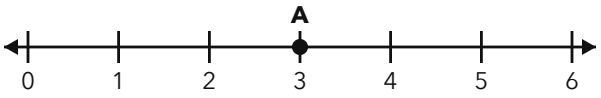


1. Subtract 1.25 from both sides.
2. x = 3.75 - 1.25 = 2.5
3. Check: 2.5 + 1.25 = 3.75.

Answer: x = 2.5. Point A is at 2.5, so it shows the solution.

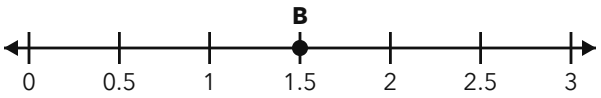
PRACTICE 6 problems

1 Solve x + 1/2 = 3 1/2. Does point A show the solution?



ANSWER _____

2 Solve 3x = 9/2. Does point B show the solution?



ANSWER _____

_____

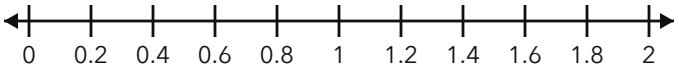
3 Solve x + 2/3 = 5/3.

ANSWER _____

4 Solve (3/4)x = 9/8.

ANSWER _____

5 Solve x + 0.6 = 1.4. Plot and label the solution x on the number line.



ANSWER _____

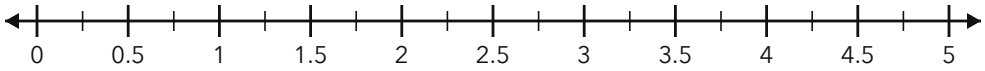
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6 Solve 0.4x = 2.4.

ANSWER _____

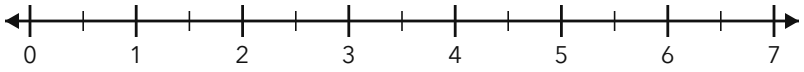
APPLY IT Show your work

1 Four friends each pay the same amount toward a $15 set of art markers. How much does each friend pay? Write and solve an equation. Mark x on the number line and explain why your answer makes sense.



ANSWER _____

2 Your game account has $6.75 after you add $2.25. How much was in it before? Write and solve an equation. Mark x on the number line and check your answer.



ANSWER _____

CHALLENGE One step up

A student says the solution to x + 7/8 = 2 1/8 is x = 3 because 2 1/8 + 7/8 = 3. Solve the equation, explain the mistake, and decide whether point A shows the correct solution.



WORK SPACE AND ANSWER

ANSWER KEY

Find the Balance

GRADE 6 · 6.A.3.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Solve x + 1/2 = 3 1/2. Does point A show the solution?	**x = 3. Yes, point A shows the solution.**
2	Solve 3x = 9/2. Does point B show the solution?	**x = 3/2, or 1.5. Yes, point B shows the solution.**
3	Solve x + 2/3 = 5/3.	**x = 1**
4	Solve (3/4)x = 9/8.	**x = 3/2**
5	Solve x + 0.6 = 1.4. Plot and label the solution x on the number line.	**x = 0.8, plotted at 0.8.**
6	Solve 0.4x = 2.4.	**x = 6**

PART 2 · APPLY IT

1. **4x = 15, so x = 3.75. Each friend pays $3.75. Mark 3.75 on the number line. The answer makes sense because 4 times $3.75 is $15.** Divide both sides of 4x = 15 by 4. Check that four equal payments of $3.75 total $15.
2. **x + 2.25 = 6.75, so x = 4.50. The account had $4.50 before. Mark 4.5 on the number line. Check: $4.50 + $2.25 = $6.75.** Subtract 2.25 from both sides of x + 2.25 = 6.75. Adding $2.25 back to $4.50 gives the stated balance.

CHALLENGE

x = 1 1/4. The student added 7/8 instead of subtracting it from both sides. Point A shows the correct solution because 1 1/4 + 7/8 = 2 1/8.

Accept equivalent fractions or decimals and correctly placed points. For context problems, require a labeled amount and a check tied to the story.