3.4: Solving Equations Using Multiplication and Division

*Review Skills:*

Multiply.

 1.  2.  3. 

Divide.

 4.  5.  6. 

Definitions:

Multiplication Property of Equality: multiplying the same term on both sides of the equation

Division Property of Equality: dividing by the same term on both sides of the equation With a partner, write and solve a real-life word problem using the equation 

Then rewrite the word problem using division.

*Lesson Practice:*

Solve the equation. Check your solution.

 1.  2. 

 3.  4. 

 5.  6. 

7. –x = -2 8. 3 = 1.5m

9. $-\frac{4}{5}x $= -8 10. $\frac{-2}{x}=-10$

Equations with No Solution

For some equations, there is no value that could be substituted for the variable to make the equation true. In this case, the equation has no solution.

**Example:** Solve 

 

Because absolute value is always nonnegative, no number has an absolute value of 
So, this equation has *no solution.*

Without solving the equation, tell whether it has *one solution, two solutions,*or *no* *solution*. If the equation has one solution, tell whether the solution is *positive* or *negative*. Explain your reasoning.

 1.  2.  3.  4. 

 5.  6.  7.  8. 

 9.  10.  11.  12. 

 13.  14. 

For each exercise number, use your answers and the key below to color the cell. Do not color the cells that have a zero in them.

One Positive Solution  Orange One Negative Solution  Blue

Two Solutions  Green No Solution  Green

