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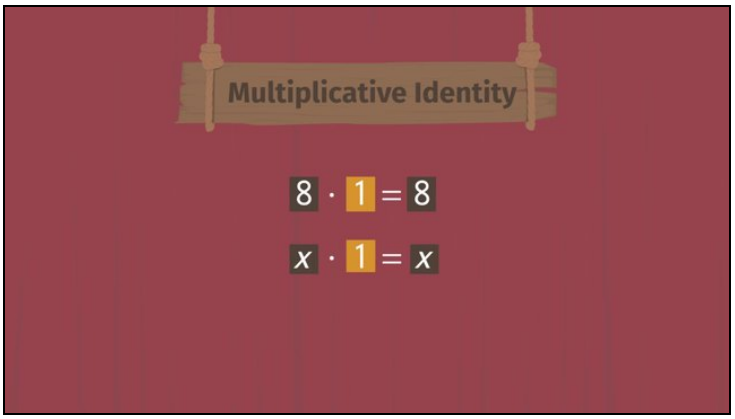
Using the Identity and Inverse to Write Equivalent Expressions



1. **Find the right identity or inverse needed to make the equation true.**
2. Describe the additive and multiplicative inverses and identities.
3. Determine which statements are true.
4. Decide which inverse or identity is being applied to x in the equation.
5. Identify which inverse or identity x represents for each equation.
6. Recall the definitions of additive identity, multiplicative identity, additive inverse, and multiplicative inverse.

\+ with lots of tips, answer keys, and detailed answer explanations for all of the problems.

Find the right identity or inverse needed to make the equation true.

Fill in the blank.

1. $5+(\_\_\_\__{1})=0$
2. $3\times(\_\_\_\__{2}\div\_\_\_\__{3})=1$
3. $4+\_\_\_\__{4}=4$
4. $7\times\_\_\_\__{5}=7$
5. $4+(\_\_\_\__{6})=0$
6. $13\times(\_\_\_\__{7}\div\_\_\_\__{8})=1$

Hints for solving these problems

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Find the right identity or inverse needed to make the equation true.

Hint #1

Write a fraction $\frac{1}{2}$ as follows $1 \div 2$.

Hint #2

The additive identity is 0 and the multiplicative identity is 1.

Hint #3

For any given number x the additive inverse is $-x$ and, if $x \neq 0$, the multiplicative inverse is $\frac{1}{x} = 1 \div x$.

Answers and detailed answer explanations for these problems

1 of 6

Find the right identity or inverse needed to make the equation true.

Answer key: 1: -5 // 2: 1 // 3: 3 // 4: 0 // 5: 1 // 6: -4 // 7: 1 // 8: 13

Keep the following in mind:

- The additive identity is 0.
- The multiplicative identity is 1.
- The additive inverse of any given number x is $-x$. Just change the sign.
- The multiplicative inverse of any non zero number x is $\frac{1}{x} = 1 \div x$, the reciprocal.

With this we can quickly solve the following exercises:

1. $5 + (-5) = 0$
2. $3 \times (1 \div 3) = 1$
3. $4 + (0) = 4$
4. $7 \times (1) = 7$
5. $4 + (-4) = 0$
6. $13 \times (1 \div 13) = 1$