Properties of Real Numbers Exit Quiz

Name the property of real numbers used in each equation. Then find the value of x.

1. $8x = 5 \cdot 8$

2. $\dfrac{2}{5} \cdot x = 1$

3. $3 + (2 + 8) = 6 + x$

Evaluate each expression if $x = 4$, $y = 3$ and $z = 6$. (Name the property used in each step.)

4. $6x + 2(2x + 7)$

5. $\dfrac{x}{y} + \dfrac{2}{x}(z + 2y) + z$

Properties of Real Numbers Exit Quiz

<mark>ANSWER</mark>

Name the property of real numbers used in each equation. Then find the value of x.

1. $8x = 5 \cdot 8$ | $x = 5$ | Commutative property of multiplication

2. $\dfrac{2}{5} \cdot x = 1$ | $x = \dfrac{5}{2}$ | Multiplicative inverse property

3. $3 + (2 + 8) = 6 + x$ | $x = 8$ | Associative property of addition

Evaluate each expression if $x = 4$, $y = 3$ and $z = 6$. (Name the property used in each step.)

4. $6x + 2(2x + 7)$

$= 6(4) + 2(2(4) + 7)$ — **Substitution**

$= 24 + 2(8 + 7)$ — **Multiply**

$= 24 + 2(15)$ — **Add**

$= 24 + 30$ — **Multiply**

$= 54$ — **Add**

5. $\dfrac{x}{y} + \dfrac{2}{x}(z + 2y) + z$

$= \dfrac{4}{3} + \dfrac{2}{4}(6 + 2(3)) + 6$ — **Substitution**

$= \dfrac{4}{3} + \dfrac{2}{2 \cdot 2}(6 + 6) + 6$ — **Multiply & Symmetric**

$= \dfrac{4}{3} + \dfrac{1}{2}(12) + 6$ — **Addition & multiplicative inverse**

$= \dfrac{4}{3} + \dfrac{1}{2}(6 \cdot 2) + 6$ — **Symmetric**

$= \dfrac{4}{3} + 6 + 6$ — **multiplicative inverse**

$= \dfrac{4}{3} + 12$ — **Add**

$= \dfrac{4}{3} + \dfrac{36}{3}$ — **LCD**

$= \dfrac{40}{3}$ — **Add**