

Number Properties

The following is a proof of the algebraic equivalency of $(2x)^3$ and $8x^3$. Fill in each of the blanks with either the statement *commutative property* or *associative property*

$$\begin{aligned}(2x)^3 &= 2x \cdot 2x \cdot 2x \\ &= 2(x \times 2)(x \times 2)x && \underline{\hspace{2cm}} \\ &= 2(2x)(2x)x && \underline{\hspace{2cm}} \\ &= 2 \cdot 2(x \times 2)x \cdot x && \underline{\hspace{2cm}} \\ &= 2 \cdot 2(2x)x \cdot x && \underline{\hspace{2cm}} \\ &= (2 \cdot 2 \cdot 2)(x \cdot x \cdot x) && \underline{\hspace{2cm}} \\ &= 8x^3\end{aligned}$$

Number Properties

The following is a proof of the algebraic equivalency of $(2x)^3$ and $8x^3$. Fill in each of the blanks with either the statement *commutative property* or *associative property*

$$\begin{aligned}(2x)^3 &= 2x \cdot 2x \cdot 2x \\ &= 2(x \times 2)(x \times 2)x && \underline{\text{associative property}} \\ &= 2(2x)(2x)x && \underline{\text{commutative property}} \\ &= 2 \cdot 2(x \times 2)x \cdot x && \underline{\text{associative property}} \\ &= 2 \cdot 2(2x)x \cdot x && \underline{\text{commutative property}} \\ &= (2 \cdot 2 \cdot 2)(x \cdot x \cdot x) && \underline{\text{associative property}} \\ &= 8x^3\end{aligned}$$