

Name \_\_\_\_\_

## Multiplying Monomials Lesson

Multiply:  $(4xy^2)(2xy^3)$



**Step 1) Rearrange the terms.**

Everything is being multiplied. Because multiplication is commutative, the order doesn't matter. We will start by rearranging the terms in such a way that they are easier to work with.

$$(4xy^2)(2xy^3) = \underbrace{4 \bullet 2}_{\text{numbers}} \bullet \underbrace{x \bullet x}_{\text{x terms}} \bullet \underbrace{y^2 \bullet y^3}_{\text{remaining y terms}}$$

**Step 2) Combine the pieces by multiplying them.**

$$\underbrace{4 \bullet 2}_{8} \bullet \underbrace{x \bullet x}_{x^2} \bullet \underbrace{y^2 \bullet y^3}_{y^5}$$

**Final answer:**  $8x^2y^5$

