



# Visual Guided Practice

Name: \_\_\_\_\_

**Learning Target:** I will simplify numerical expressions with integer exponents.**Form A****Directions:** Apply the meaning and properties of exponents to simplify each expression.**1. We Do Together**

<p><b>a.</b></p> $6^7 \cdot 6^{-2}$ $\frac{6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6}{\phantom{6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6}}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <math>6^{\square}</math> </div> <p><b>Multiplying Powers Property:</b></p> $6^7 \cdot 6^{-2} = 6^{\square} = 6^{\square}$	<p><b>b.</b></p> $\frac{5^3}{5^7}$ $\frac{5 \cdot 5 \cdot 5}{\phantom{5 \cdot 5 \cdot 5}}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 150px; height: 20px; margin: 0 auto;"></div> <math>1</math> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> </div> <div style="text-align: center; margin: 10px 0;"> <math>\frac{1}{\square}</math> or <math>5^{\square}</math> </div> <p><b>Dividing Powers Property:</b></p> $\frac{5^3}{5^7} = 5^{\square} = 5^{\square} = \frac{1}{\square}$	<p><b>c.</b></p> $(9^3)^2$ $9^{\square} \cdot 9^{\square}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <math>\cdot</math> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> </div> <div style="text-align: center; margin: 10px 0;"> <math>9^{\square}</math> </div> <p><b>Power of a Power Property:</b></p> $(9^3)^2 = 9^{\square} = 9^{\square}$
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**2. Reflect:** What questions do you have about simplifying expressions with exponents?**3. You Do Together**

<p><b>a.</b></p> $4^{-8} \cdot 4^2$ <p><b>Multiplying Powers Property:</b></p> $4^{-8} \cdot 4^2 = 4^{\square} = 4^{\square}$ <div style="text-align: center; margin: 10px 0;"> <math>= \frac{1}{\square}</math> </div>	<p><b>b.</b></p> $\frac{8^3}{8^7}$ <p><b>Dividing Powers Property:</b></p> $\frac{8^3}{8^7} = 8^{\square} = 8^{\square} = \frac{1}{\square}$	<p><b>c.</b></p> $(3^2)^4$ <p><b>Power of a Power Property:</b></p> $(3^2)^4 = 3^{\square} = 3^{\square}$
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# Visual Guided Practice

Name: \_\_\_\_\_

**Learning Target:** I will simplify numerical expressions with integer exponents.

**Form B**

**Directions:** Apply the meaning and properties of exponents to simplify each expression.

## 1. We Do Together

<p><b>a.</b></p> $2^{-9} \cdot 2^3$ $\frac{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}}$ $\frac{1}{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}}$ $\frac{1}{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}} \text{ or } 2^{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}}$ <p><b>Multiplying Powers Property:</b></p> $2^{-9} \cdot 2^3 = 2^{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}} = 2^{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}}$ $= \frac{1}{\phantom{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}}$	<p><b>b.</b></p> $\frac{7^6}{7^2}$ $\frac{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}{\phantom{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}}$ $\phantom{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}$ $7^{\phantom{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}}$ <p><b>Dividing Powers Property:</b></p> $\frac{7^6}{7^2} = 7^{\phantom{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}} = 7^{\phantom{7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7}}$	<p><b>c.</b></p> $(5^4)^2$ $5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}} \cdot 5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}}$ $\phantom{5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}}} \cdot \phantom{5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}}}$ $5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}}$ <p><b>Power of a Power Property:</b></p> $(5^4)^2 = 5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}} = 5^{\phantom{5 \cdot 5 \cdot 5 \cdot 5}}$
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**2. Reflect:** What questions do you have about simplifying expressions with exponents?

## 3. You Do Together

<p><b>a.</b></p> $9^7 \cdot 9^{-3}$ <p><b>Multiplying Powers Property:</b></p> $9^7 \cdot 9^{-3} = 9^{\phantom{9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9}} = 9^{\phantom{9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9}}$	<p><b>b.</b></p> $\frac{3^2}{3^7}$ <p><b>Dividing Powers Property:</b></p> $\frac{3^2}{3^7} = 3^{\phantom{3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3}} = 3^{\phantom{3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3}} = \frac{1}{\phantom{3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3}}$	<p><b>c.</b></p> $(8^3)^2$ <p><b>Power of a Power Property:</b></p> $(8^3)^2 = 8^{\phantom{8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8}} = 8^{\phantom{8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8}}$
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# Visual Guided Practice

Name: \_\_\_\_\_

**Learning Target:** I will simplify numerical expressions with integer exponents.**Form C****Directions:** Apply the meaning and properties of exponents to simplify each expression.**1. We Do Together**

<p><b>a.</b></p> $4^8 \cdot 4^{-3}$ $\frac{4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4}{\phantom{4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4}}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <math>4^{\square}</math> </div> <p><b>Multiplying Powers Property:</b></p> $4^8 \cdot 4^{-3} = 4^{\square} = 4^{\square}$	<p><b>b.</b></p> $\frac{6^2}{6^7}$ $\frac{6 \cdot 6}{\phantom{6 \cdot 6}}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 150px; height: 20px; margin: 0 auto;"></div> <math>\frac{1}{\phantom{1}}</math> </div> <div style="text-align: center; margin: 10px 0;"> <math>\frac{1}{\phantom{1}}</math> or <math>6^{\square}</math> </div> <p><b>Dividing Powers Property:</b></p> $\frac{6^2}{6^7} = 6^{\square} = 6^{\square} = \frac{1}{\square}$	<p><b>c.</b></p> $(7^3)^2$ $7^{\square} \cdot 7^{\square}$ <div style="text-align: center; margin: 10px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <math>\cdot</math> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> </div> <div style="text-align: center; margin: 10px 0;"> <math>7^{\square}</math> </div> <p><b>Power of a Power Property:</b></p> $(7^3)^2 = 7^{\square} = 7^{\square}$
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**2. Reflect:** What questions do you have about simplifying expressions with exponents?**3. You Do Together**

<p><b>a.</b></p> $8^{-6} \cdot 8^2$ <p><b>Multiplying Powers Property:</b></p> $8^{-6} \cdot 8^2 = 8^{\square} = 8^{\square}$ <div style="text-align: center; margin: 10px 0;"> <math>= \frac{1}{\square}</math> </div>	<p><b>b.</b></p> $\frac{3^7}{3^2}$ <p><b>Dividing Powers Property:</b></p> $\frac{3^7}{3^2} = 3^{\square} = 3^{\square}$	<p><b>c.</b></p> $(5^2)^4$ <p><b>Power of a Power Property:</b></p> $(5^2)^4 = 5^{\square} = 5^{\square}$
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