



Simplify the following expressions using the properties of the rational exponents. All negative exponents should end at final answer and do so in simplest form.

$$= 2 \cdot 2 \cdot 5^2 = 5^2$$

$$\boxed{2 \cdot 5}$$

$$= (2^2)^2 = 2^4$$

$$\boxed{4 \sqrt{2}}$$

$$= 2 \cdot 2 = (2^2 \cdot 2^2)^2$$

$$2^4 \cdot 2^4$$

$$\boxed{2 \sqrt{2}}$$

$$= (2^2)^2 = 2^4 \cdot 2^4$$

$$\sqrt{2 \cdot 2} = \boxed{\frac{\sqrt{2}}{2}}$$

$$= \frac{2^2}{2^4} = \frac{1}{2^2}$$

$$\boxed{\frac{1}{4}}$$

$$= 2 \cdot 2 \cdot 2 = 2^3$$

$$2^2 \cdot 2^2$$

$$\boxed{2 \sqrt{2}}$$

$$= 2 \cdot 2 = (2^2 \cdot 2^2)^2$$

$$2^4 \cdot 2^4$$

$$2^2 \cdot 2^4 \cdot 2^4 = \boxed{2 \sqrt{2}}$$

$$= 2 \cdot 2 = \frac{2^2}{2^2}$$

$$\frac{2^2 \cdot 2^2}{2^2} = \boxed{\frac{2^2}{2}}$$

$$= \frac{2}{2} = 2^2 \cdot 2^4$$

$$\boxed{2^2}$$

$$= \frac{2^2}{2^4} = \frac{2^2 \cdot 2^2}{2^4}$$

$$\boxed{\frac{\sqrt{2} \cdot 2^2}{2}}$$

$$= (2^2)^2 = 2^4$$

$$2^2 \cdot 2^2 = \boxed{2 \sqrt{2}}$$

$$= (2^2)^2 = 2^4$$

$$2^4 \cdot 2^4 = \boxed{2 \sqrt{2}}$$

$$= 2 \cdot 2 = \frac{2^2 \cdot 2^2}{2^2}$$

$$\frac{2^2 \cdot 2^2}{2^2} = \boxed{\frac{2^2}{2}}$$

$$= \frac{2}{2} = 2^2 \cdot 2^4$$

$$\boxed{2^2}$$

$$= \frac{2^2}{2^4} = \frac{2^2 \cdot 2^2}{2^4}$$

$$\frac{2^2 \cdot 2^2}{2^4} = \boxed{\frac{2 \sqrt{2}}{2}}$$