

Problem Set

1. Use what you know about exponential notation to complete the expressions below.

$$\underbrace{(-5) \times \cdots \times (-5)}_{17 \text{ times}} =$$

$$\underbrace{3.7 \times \cdots \times 3.7}_{\text{times}} = 3.7^{19}$$

$$\underbrace{7 \times \cdots \times 7}_{\text{times}} = 7^{45}$$

$$\underbrace{6 \times \cdots \times 6}_{4 \text{ times}} =$$

$$\underbrace{4.3 \times \cdots \times 4.3}_{13 \text{ times}} =$$

$$\underbrace{(-1.1) \times \cdots \times (-1.1)}_{9 \text{ times}} =$$

$$\underbrace{\left(\frac{2}{3}\right) \times \cdots \times \left(\frac{2}{3}\right)}_{19 \text{ times}} =$$

$$\underbrace{\left(-\frac{11}{5}\right) \times \cdots \times \left(-\frac{11}{5}\right)}_{\text{times}} = \left(-\frac{11}{5}\right)^x$$

$$\underbrace{(-12) \times \cdots \times (-12)}_{\text{times}} = (-12)^{15}$$

$$\underbrace{a \times \cdots \times a}_{m \text{ times}} =$$

2. Write an expression with (-1) as its base that will produce a positive product, and explain why your answer is valid.
3. Write an expression with (-1) as its base that will produce a negative product, and explain why your answer is valid.
4. Rewrite each number in exponential notation using 2 as the base.

$$8 =$$

$$16 =$$

$$32 =$$

$$64 =$$

$$128 =$$

$$256 =$$

5. Tim wrote 16 as $(-2)^4$. Is he correct? Explain.
6. Could -2 be used as a base to rewrite 32? 64? Why or why not?