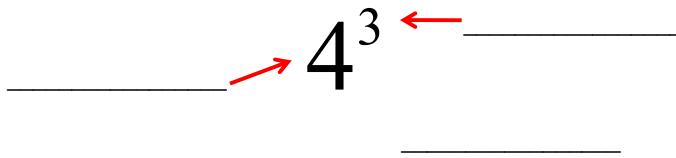


10.1

Exponents

Review – Parts of an Exponent



Example 1

Write each product using exponents

1) $5 \bullet 5 \bullet 5$

2) $m \bullet m \bullet m \bullet m \bullet m \bullet m$

3) $a \bullet b \bullet b \bullet a \bullet b$

4) $-4 \bullet -4 \bullet -4$

5) $\frac{1}{2} \bullet \frac{1}{2} \bullet \frac{1}{2} \bullet \frac{1}{2}$

On Your Own

Write each product using exponents

6) $(-7)(-7)(-7)$

7) $\pi \bullet \pi \bullet r \bullet r \bullet r$

8) $\frac{1}{4} \bullet \frac{1}{4} \bullet \frac{1}{4} \bullet \frac{1}{4} \bullet \frac{1}{4}$

9) $0.3 \bullet 0.3 \bullet 0.3 \bullet x \bullet x$

Review – Order of Operations

P
E
M
D
A
S

P E M D A S
Left →Right Left →Right

$$12) (4-2)^3 - 5$$

$$13) 8 + 2 \times 9^2$$

Practice

Simplify the following

$$10) 9 + 6 \times 4 - 7$$

$$11) 24 \div (3 \bullet 5 - 7)$$

P E M D A S
Left →Right Left →Right

$$14) 6 + 2^3 \div 8$$

$$15) 100 - 5^2 \times 4$$

Important!!

$$(-4)^2 \text{ vs } -4^2$$

Evaluation each expression

$$16) -2^4$$

$$17) (-2)^4$$

On Your Own

Evaluation each expression

$$18) 3 + 2 \bullet 3^4$$

$$19) 3^3 - 8^2 \div 2$$

On Your Own

Evaluation each expression

$$20) -5^4$$

$$21) \left(-\frac{1}{6}\right)^3$$

$$22) |-3^3 \div 9|$$

Evaluating with negative numbers

Evaluate x^3 if $x = -2$