

Warm-Up

October 17, 2018

A. $(-4)^2 - 3(-9 \div 3)^2$

$$16 - 3(-3)^2$$

$$16 - 3(9)$$

$$16 - 27 \quad (-11)$$

B. $(-2 - 4)^3 + (4 + 3 \times 4)^2$

$$(-6)^3 + (4 + 12)^2$$

$$-216 + 256 \quad (40)$$

C. Express as a single power. then Evaluate

1. $3^9 \times 3^6$

$$3^{15}$$

2. $(-4)^9 \div (-4)^5$

$$(-4)^4$$

~~$$-4^4$$~~

$$\begin{aligned}
 3. \quad & (-2)^6 \times (-2)^3 \div (-2)^2 \times (-2)^8 \\
 & (-2)^{6+3-2+8} \\
 & (-2)^{15}
 \end{aligned}$$

Use exponent laws when they apply! **Simplify** THEN Evaluate

a) $\frac{10^4 \times 10^3}{10^2}$

$\frac{10^1}{10^2} = 10^{-1}$
 10^5
 100000

Simplified
Evaluate

b) $(-4)^3 \div (-4)^2 \times (-4)^{10}$

$\{-4\}^{3-2+10}$
 $(-4)^{11}$
 4 194 304

c) $3^2 \times 3^1 + 2^2 \times 2^4$

$3^3 + 2^6$
 27 + 64
 91

d) $6^1 (6^6 \div 6^2) - 6^4$

$6^1 (6^4) - 6^4$
 $6^5 - 6^4$
 7776 - 1296
 6480

Simplify [use the laws of exponents when multiply and divide].
Same base

a) $5^3 \times 5^2$
 5^5

b) $(-3)^8 \div (-3)^4$
 $(-3)^4$

c) $1^2 \times 1^4 - 1^3$
 $1^6 - 1^3$

d) $\frac{4^2 \times 4^4}{4^2 \times 4^1}$
 $\frac{4^6}{4^3}$ 4^3

Simplify

Look for any law to follow!!!!

$$(-3)^6 \div (-3)^5 - (-3)^5 \div (-3)^5$$

$$(-3)^1 - (-3)^0$$

Simplify, if possible, THEN evaluate

a) $5^2 + 5^3$

$25 + 125$

150

b) $5^2 \times 5^3$

5^5

3125

Simplify, if possible, then Evaluate

c) $3^3 \times 3^4 - 3^5 \times 3^1$

$$3^7 - 3^6$$

$$2187 - 729$$

$$1458$$

d) $\frac{(-2)^6 \times (-2)^2}{(-2)^3 \times (-2)^0}$

$$\frac{(-2)^8}{(-2)^3}$$

$$(-2)^5$$

$$-32$$

$$e) [(-2)^4 \times (-2)^3] - [(-3)^4 \div (-3)^3]$$

$$\boxed{(-2)^7 - (-3)^1}$$

$$\bullet 128 - -3$$

$$\quad \quad \quad \textcircled{-125}$$

Simplify

$$f) -5^3 \times 5^2 + 2^4 - 4^3$$

$$\boxed{-5^5 + 2^4 - 4^3}$$

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simplify then evaluate

Worksheet