Warm-Up October 22, 2019

Evaluate

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

$16 - 3(-3)^2$

$16 - 3(9)$

$16 - 27$

-11

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

C. Express as a single power, then Evaluate

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

simplify

middle step 3^{9+6}

3^{15} simplified

14 348 907 evaluate

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

$(-4)^{9-5}$

$(-4)^4$

256

2. $(-2)^6 \times (-2)^3 \div (-2)^2 \times (-2)^8$

middle step $(-2)^{6+3-2+8}$

Single Power $(-2)^{15}$

~~Use exponent laws when they apply!~~

Simplify THEN Evaluate

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

10^{4+3} over 10^2

$\frac{10^7}{10^2}$

simplified 10^{7-2} → 10^5

Evaluated → 100 000

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

$(-4)^{3-2+10}$

$(-4)^{11}$ ← simplified

−4 194 304

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

$3^3 + 2^6$ simplified

$27 + 64$

91 evaluate

d)

Simplify and evaluate BEDMAS

$6\,(6^6 \div 6^2) - 6^4$

$6 \times (6^6 \div 6^2) - 6^4$

$6^1(6^{6-2}) - 6^4$

$6^1 \times 6^4 - 6^4$

$6^5 - 6^4$ ← simplified No more Rules to follow

$7776 - 1296$

6480 Evaluated

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

Same base

1) $5^3 \times 5^2$

5^5

2) $(-3)^8 \div (-3)^4$

$(-3)^4$

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

$1^6 - 1^3$

$1 - 1$

0

4) $\dfrac{4^2 \times 4^4}{4^2 \times 4^1}$

$\dfrac{4^6}{4^3}$

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

$5^2 + 5^3$

$25 + 125$

150

$5^2 \times 5^3$

5^5

3125

Simplify, if possible, then Evaluate

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

$3^7 - 3^6$

$2187 - 729$

1458

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

-2

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

$$(-2)^7 - (-3)^1$$

$$-128 - -3 \quad -125$$

Simplify

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

$$-5^5 + 2^4 - 4^3$$

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#10 Simplify then evaluate

#13 Simplify then evaluate

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Worksheet