



Express each as a single power and then evaluate

1)
$$6^2 \times 6^4$$
 2) $-2^3 \times 2^7$

$$^{2)}$$
 $-2^3 \times 2^7$

$$^{3)} (-7)^2 \times (-7)^3$$

$$4) 12^{81} 12^{79}$$

$$5) \frac{(-3)^{15}}{(-3)^{10}}$$

$$6) \frac{(7)^5}{(7)}$$

Evaluate:

1)
$$3(10^2 - 6^2) \div 2 + 1$$

• Grade 9 Warm Up



Express each as a single power and then evaluate

1)
$$6^{2} \times 6^{4}$$

$$= 6^{6}$$

$$= -2^{10}$$

$$= -1024$$
3) $(-7)^{2} \times (-7)^{3}$

$$= (-7)^{5}$$

$$= -16807$$
4) 12^{81}

$$12^{79}$$
5) $\frac{(-3)^{15}}{(-3)^{10}}$
6) $\frac{(7)^{5}}{(7)^{1}}$

$$= 12^{2}$$

$$= -243$$

$$= -2401$$

Evaluate:

1)
$$3(10^{2} - 6^{2}) \div 2 + 1$$
 $3(10^{2} - 6^{2}) \div 2 + 1$
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Laws

1)
$$\chi^{\circ} = 1$$

$$\chi (\chi)^{\alpha} (\chi)^{b} = \chi^{\alpha + b}$$

$$\frac{3}{(\chi)^{c}} = \chi^{b-\alpha}$$

Remember to always use BEDMAS when evaluating

Simplify first (using exponent law I) THEN Evaluate each of the following:

$$\frac{10^{1003}}{10^{1000}} - 1$$



$$(6 \times 10^{5}) + (5 \times 10^{4}) + (7 \times 10^{3}) + (4 \times 10^{3})$$

$$10^{5} 10^{4} 10^{3} 10^{2} 10^{1} 10^{0}$$

$$6 5 7 0 0 4$$



MUST COPY OUT QUESTION AND THEN ANSWER

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Questions: 6, 10acegi 11,13,17,18,19

Master 2.20 Extra Practice 4

Lesson 2.4: Exponent Laws 1

Write each product as a single power.

a) $4^3 \times 4^2$

b) $5^{0} \times 5^{0}$ c) $(-2)^{2} \times (-2)^{4}$ e) $(-7)^{0} \times (-7)^{2}$ f) $(-9)^{6} \times (-9)^{3}$

d) $-6^3 \times 6^1$

2. Write each quotient as a single power.

a) $8^7 \div 8^5$

b) $10^4 \div 10^0$

Express as a single power.

a) $2^3 \times 2^6 \div 2^9$ b) $(-5)^8 \div (-5)^4 \times (-5)^3$ c) $\frac{6^3 \times 6^5}{6^2 \times 6^4}$

4. Simplify, then evaluate. a) $2^2 - 2^0 \times 2 + 2^3$

b) $(-2)^6 \div (-2)^5 - (-2)^5 \div (-2)^3$ **c)** $-2^2(2^3 \div 2^1) - 2^3$

5. Simplify, then evaluate.

a) $4^3 \div 4^2 + 2^4 \times 3^2$

b) $3^2 + 4^2 \times 4^1 \div 2^3$ **c)** $\frac{3^4}{3^3} + \frac{4^2 \times 4^0}{2^4}$

- 6. Write each relationship as a product of powers or a quotient of powers.
 - a) One million is 1000 times as great as one thousand.
 - b) One billion is 1000 times as great as one million.
 - c) One hundred is one-tenth of one thousand.
 - d) One is one-millionth of one million.
 - e) One trillion is 1000 times as great as one thousand million.
- 7. Identify, then correct any errors in these answers.

Explain how you think the errors occurred.

a) $5^3 \times 5^2 = 5^6$

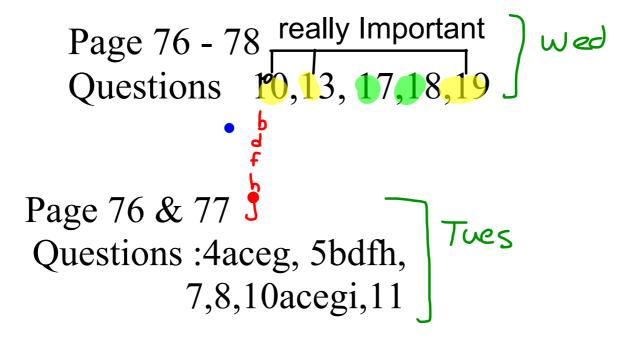
b) $2^3 \times 4^2 = 8^5$

c) $(-3)^8 \div (-3)^4 = (-3)^4$

d) $1^2 \times 1^4 - 1^3 = 1^3$ e) $\frac{4^2 \times 4^4}{4^2 \times 4^1} = 4^2$

Sessions with

MUST COPY OUT QUESTION AND THEN ANSWER



Worksheet -Simplifying Powers

Exponent law I

SEE attachement page for the sheet....click on the paperclip to view or print it

Exponent Law 1 Review.pdf