

Name: _____

1. Standard form for an exponential expression is $A \cdot B^x$. Find the value of A for the exponential expression $5^{(x+3)}$.

1. 15 2. 5
3. 3 4. 125

2. Simplify the expression $\frac{3x^{-4}y^5}{(2x^3y^{-7})^{-2}}$ using only

positive exponents.

1. $\frac{y^9}{12x^2}$

2. $\frac{12x^2}{y^9}$

3. $\frac{3y^{12}}{2x}$

4. $\frac{2x}{3y^{12}}$

3. Simplify: $\left(\frac{9x^2z^4}{49x^{-2}}\right)^{1/2}$

1. $\frac{9.5xz^2}{24.5x^{-1}}$

2. $\frac{3xz^2}{7x^{-1}}$

3. $\frac{3xz^2}{7x}$

4. $\frac{3x^2z^2}{7}$

9. If $3^{2x-2} = 81$, what is the value of x ?

1. 1 2. 2
3. 3 4. 4

4. Simplify: $\frac{27k^5m^8}{(4k^3)(9m^2)}$

1. $\frac{27k^2m^6}{36}$

2. $\frac{3k^8m^{10}}{4}$

3. $\frac{27k^8m^{10}}{36}$

4. $\frac{3k^2m^6}{4}$

5. What is the product of $-3x^2y$ and $(5xy^2 + xy)$?

1. $-15x^3y^3 - 3x^3y^2$

2. $-15x^3y^3 - 3x^3y$

3. $-15x^2y^2 - 3x^2y$

4. $-15x^3y^3 + xy$

6. Which expression is equivalent to $x^{-1} \cdot y^2$?

1. xy^2

2. $\frac{y^2}{x}$

3. $\frac{x}{y^2}$

4. xy^{-2}

7. The expression $\frac{a^2b^{-3}}{a^{-4}b^2}$ is equivalent to:

1. $\frac{a^6}{b^5}$

2. $\frac{b^5}{a^6}$

3. $\frac{a^2}{b}$

4. $a^{-2}b^{-1}$

8. Evaluate: $-10x^0$

1. 10 2. -10

3. $-10x$ 4. $10/x$

10. Determine the value of x and y if $2^y = 8^x$ and $3^y = 3^{x+4}$.

1. $x = 6, y = 2$
2. $x = -2, y = -6$
3. $x = 2, y = 6$
4. $x = y$

Answer Key for CM Exp 4

Question 1: 4

Question 4: 4

Question 7: 1

Question 10: 3

Question 2: 2

Question 5: 1

Question 8: 2

Question 3: 4

Question 6: 2

Question 9: 3