

Name: _____

1. Which expression is equivalent to $\frac{x^{-1}y^4}{3x^{-3}y^{-1}}$?

1. $\frac{x^4y^5}{3}$
2. $\frac{x^5y^4}{3}$
3. $3x^4y^5$
4. $\frac{y^4}{3x^3}$

2. Which is equivalent to the expression $\frac{(4x^{-6}y^{12})^{-1/2}}{2x^4y^{-4}}$

after it has been simplified?

1. $\frac{4}{xy^2}$
2. $\frac{1}{16x^2y^2}$
3. $\frac{1}{4xy^2}$
4. $4xy^2$

3. The product of $(5ab)$ and $(-2a^2b)^3$ is

1. $-30a^6b^4$
2. $-30a^7b^4$
3. $-40a^6b^4$
4. $-40a^7b^4$

4. Find the solution set for the following equation.

$$\sqrt{8x+48} = x$$

1. {4}
2. {12}
3. {4, 12}
4. {-4, 12}

5. The solution set of the equation $\sqrt{x+3} = 3-x$ is

1. {1}
2. {0}
3. {1, 6}
4. {2, 3}

6. A circle whose center is the origin passes through the point $(-5, 12)$. Which point also lies on this circle?

1. $(10, 3)$
2. $(-12, 13)$
3. $(11, 2\sqrt{12})$
4. $(-8, 5\sqrt{21})$

7. What is the equation of a circle with its center at $(5, -2)$ and a radius of 3?

1. $(x-5)^2 + (y+2)^2 = 3$
2. $(x-5)^2 + (y+2)^2 = 9$
3. $(x+5)^2 + (y-2)^2 = 3$
4. $(x+5)^2 + (y-2)^2 = 9$