

Name _____
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Date _____
Algebra II

Negative Exponents

Reduce each of the following and express with positive exponents

1. $\frac{14x^{-2}y^3}{-8x^{-5}y^5}$

2. $(3y)^2 (3zy^4)^{-2}$

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

4. $\frac{(x^2y)^0}{(x^3y^0)^{-3}}$

5. Which expression is equivalent to $\frac{x^{-1}y^?}{- -5}$?

1) $\frac{x^4y^?}{-}$

3) $3x^4y^5$

2) $\frac{x^5y^?}{-}$

4) $\frac{y^4}{3x^5}$

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

(1) xy^2

(3) $\frac{x}{y^2}$

(2) $\frac{y^2}{x}$

(4) xy^{-2}

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

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

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

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

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

8. Which expression is equivalent to $\frac{2x^{-2}y}{}$?

1) $\frac{y^2}{}$ 3) $\frac{2x}{}$

2) $\frac{2y}{}$ 4) $\frac{x^2}{}$

9. Which expression is equivalent to $\sqrt{3x^2}$?

1) $\frac{1}{}$ 3) $\frac{1}{}$

2) $\frac{-3x^2}{}$ 4) $\frac{-9x^2}{}$

10. The expression $(2a)^{-4}$ is equivalent to

1) $\frac{-8a^4}{}$ 3) $\frac{1}{}$

2) $\frac{16}{a^4}$ 4) $\frac{1}{}$

11. Which expression is equivalent to $(5^{-2}a^3b^{-4})^{-1}$?

1) $\frac{10b}{}$ 3) $\frac{a^3}{}$

2) $\frac{25b}{}$ 4) $\frac{a^2}{}$

12. Simplify the expression $\frac{3x^{-4}}{}$ and write the answer using only positive exponents.

13. Simplify the expression $\frac{(3x^{-2})^0}{(2x^2)(2y)^{-3}}$ and write your answer using a positive exponent.