

Name: \_\_\_\_\_

Class/Period: \_\_\_\_\_

Assignment: HW #2A Math 1

Instructions: SHOW WORK ON SEPARATE SHEET OF PAPER FOR CREDIT!

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

A  $\frac{10b^4}{a^3}$

B  $\frac{25b^4}{a^3}$

C  $\frac{a^3}{25b^4}$

D  $\frac{a^2}{125b^5}$

2 The product of  $3x^2y$  and  $-4xy^3$  is

A  $-12x^3y^4$

B  $12x^3y^4$

C  $-12x^2y^3$

D  $12x^2y^3$

3 Which expression represents  $\frac{27x^{18}y^5}{9x^6y}$  in simplest form?

A  $3x^{12}y^4$

B  $3x^3y^5$

C  $18x^{12}y^4$

D  $18x^3y^5$

4 Which expression is equivalent to  $\frac{x^{-1}y^4}{3x^{-5}y^{-1}}$ ?

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

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

C  $3x^4y^5$

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

5 The expression  $\frac{12w^9y^3}{-3w^3y^3}$  is equivalent to

A  $-4w^6$

B  $-4w^3y$

C  $9w^6$

D  $9w^3$

6 Which expression is equivalent to  $y^5$ ?

A  $y \times y \times y \times y \times y$

B  $5y$

C  $y \times 5$

D  $5 \times 5 \times 5 \times 5 \times 5$

7 Simplify the following using the properties of integer exponents.

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

A  $3^5$

B  $3^{14}$

C  $\frac{1}{3^5}$

D  $\frac{1}{3^{14}}$

8 The expression  $\frac{(4x^3)^2}{2x}$  is equivalent to

- A  $4x^4$
- B  $4x^5$
- C  $8x^4$
- D  $8x^5$

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

- A  $\frac{9.5xz^2}{24.5x^{-1}}$
- B  $\frac{3xz^2}{7x^{-1}}$
- C  $\frac{3xz^2}{7x}$
- D  $\frac{3x^2z^2}{7}$

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

- A  $\frac{y^9}{12x^2}$
- B  $\frac{12x^2}{y^9}$
- C  $\frac{3y^{12}}{2x}$
- D  $\frac{2x}{3y^{12}}$