



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

Date: \_\_\_\_\_

ID: A

## Monomials and Polynomials

### Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

\_\_\_\_\_ 1. The value of  $2.16 \times 10^{-4}$  is

- a. 21,600  
b. 0.00216

- c. 0.000216  
d. 0.0000216

\_\_\_\_\_ 2. The sum of  $\frac{x+2}{-3}$  and  $\frac{x-3}{2}$  is equal to

a.  $\frac{x-13}{6}$

c.  $\frac{x+13}{6}$

b.  $\frac{13-x}{6}$

d.  $-\frac{x+13}{6}$

### Numeric Response

3. Express in *simplest* form:

$$\left( \frac{6a^2 - 7ab + 2b^2}{5x} \right) \left( \frac{10x}{4a - 2b} \right)$$

4. Solve the equation:  $\frac{3}{2x-1} = \frac{1}{3x-5}$ .

5. If  $x = \frac{1}{1+a}$ , express  $2x-1$  as a single fraction in terms of  $a$ .

6. Combine into a single fraction:  $\frac{x}{x^2-4} - \frac{1}{x+2}$

7. Write in simplest form, using positive integer exponents:

$$\left(\frac{ay^2}{b^4}\right)^3 \left(\frac{b}{y^3}\right)^5$$

8. If the identity  $(a+b)^2 = a^2 + 2ab + b^2$  is used to determine that integer equal to  $17^2$ , what is the numerical value of  $2ab$  when  $a = 10$ ?

9. Perform the indicated operations and write the result in *simplest* form:

$$\left(\frac{4x-8ax^2}{3}\right) \left(\frac{3+6ax}{8a^2x^2-2}\right)$$

10. The number 0.0000017 is to be expressed in the form  $1.7 \times 10^n$ . Find the value of  $n$ .

11. Find the product of the roots of the equation  $3x^2 + 7x - 6 = 0$ .

## Monomials and Polynomials Answer Section

### MULTIPLE CHOICE

1. ANS: C
2. ANS: A

### NUMERIC RESPONSE

3. ANS:  
 $3a-2b$
4. ANS:  
 $2$
5. ANS:  
 $\frac{1-a}{1+a}$
6. ANS:  
 $\frac{2}{x^2-4}$
7. ANS:  
 $\frac{a^3}{b^7y^9}$
8. ANS:  
 $140$
9. ANS:  
 $-2x$
10. ANS:  
 $-6$
11. ANS:  
 $-2$

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

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**MULTIPLE CHOICE**

1.  A  B  C  D  E

2.  A  B  C  D  E