

Student: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Instructor: Rick Butterworth  
Course: Intro Algebra 2007-2008  
Book: Carson: Elementary Algebra, 2e

Assignment: Inter - Test One - Practice

1. Evaluate the expression.

$$6^0$$

$$6^0 = \square$$

(Simplify your answer. Type an integer or a decimal.)

2. Simplify.

$$-6^4$$

Which choice is correct?

A.  $\frac{1}{1296}$

B.  $-1296$

C.  $1296$

D.  $-24$

3. Evaluate.

$$\left(-\frac{6}{7}\right)^2$$

$$\left(-\frac{6}{7}\right)^2 = \square$$

4. Express using a positive exponent.

$$p^{-6}$$

$$p^{-6} = \square$$

(Simplify your answer. Type a positive exponent.)

5. Evaluate this expression.

$$(-9)^{-3}$$

$$(-9)^{-3} = \square$$

6. Evaluate this expression.

$$-7^{-2}$$

$$-7^{-2} = \square$$

(Simplify your answer. Type an integer or a fraction.)

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7.

Express with positive exponents. Then simplify, if possible.

$$\left(\frac{z}{y}\right)^{-4}$$

$$\left(\frac{z}{y}\right)^{-4} = \square$$

(Simplify your answer. Type an integer or a fraction.)

8.

Express using a positive exponent.

$$\frac{1}{u^{-8}}$$

$$\frac{1}{u^{-8}} = \square$$

(Simplify your answer. Type exponential notation with positive exponents.)

9.

Identify the degree of each term of the polynomial and the degree of the polynomial.

$$x^3 - 3x + x^7 - 8x^5$$

The degree of the first term is .

The degree of the second term is .

The degree of the third term is .

The degree of the fourth term is .

The degree of the polynomial is .

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10.

Determine the degree of each term and the degree of the polynomial.

$$-4b^8 - 9b^5 + 5b^4 + 5b - 9$$

The degree of  $-4b^8$  is .

The degree of  $-9b^5$  is .

The degree of  $5b^4$  is .

The degree of  $5b$  is .

The degree of  $-9$  is .

Find the degree of the polynomial  $-4b^8 - 9b^5 + 5b^4 + 5b - 9$ .

The degree of the polynomial is .

11.

Evaluate the polynomial for  $x = 1$ .

$$2x^2 - 4x + 7$$

When  $x = 1$ ,  $2x^2 - 4x + 7 =$

(Simplify your answer.)

12.

Arrange the polynomial in descending order. Then find the leading term and leading coefficient.

$$x^5 + x + 4x^4 + 9 + 7x^3$$

The polynomial in descending order is written as .

The leading term of the polynomial is .

The leading coefficient is .

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13. Collect like terms and then arrange them in descending order.

$$7x^5 - 8x^9 - 6x^5 + 9x^9$$

$$7x^5 - 8x^9 - 6x^5 + 9x^9 = \square$$

14. Combine like terms and write the resulting polynomial in descending order of degree.

$$-8k - 8k^2 + 16k^3 - 15k^2 + 12k^4 + 15k + 8k^4$$

The solution is  $\square$ .

15. Collect like terms.

$$8b - 2d - 6b + 16d$$

$$8b - 2d - 6b + 16d = \square$$

16. Collect like terms.

$$5v^2 - 6vp + 10p^2 + 3v^2 - 3p^2 + 30vp + 12p^2$$

$$5v^2 - 6vp + 10p^2 + 3v^2 - 3p^2 + 30vp + 12p^2 = \square$$

17. Add.

$$(-8x + 8) + (x^2 + x - 9)$$

$$(-8x + 8) + (x^2 + x - 9) = \square$$

(Simplify your answer.)

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18.

Add.

$$(5x^2 - 2x + 14) + (6x^2 + 9x - 71)$$

$$(5x^2 - 2x + 14) + (6x^2 + 9x - 71) = \square$$

(Simplify your answer.)

19.

Add, and if possible, simplify the expression.

$$(-5x^4y^3 + 9x^3y^2 - 3xy^2) + (3x^3y^3 - 2x^3y^2 - 5xy)$$

$$(-5x^4y^3 + 9x^3y^2 - 3xy^2) + (3x^3y^3 - 2x^3y^2 - 5xy) = \square$$

(Simplify your answer.)

20.

Subtract.

$$(4x + 3) - (2x + 5)$$

The answer is  $\square$ .

21.

Subtract the polynomials.

$$(-6a^2 + 8a + 6) - (6a^2 + 12a - 4)$$

$$(-6a^2 + 8a + 6) - (6a^2 + 12a - 4) = \square$$

(Simplify your answer.)

22.

Subtract the polynomials.

$$(-6v^3 - 5v^2 + 2v + 8) - (-6v^3 + 8v^2 + 6v - 4)$$

$$(-6v^3 - 5v^2 + 2v + 8) - (-6v^3 + 8v^2 + 6v - 4) = \square$$

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23.

Subtract the polynomials.

$$(-17b^4 - 21b^3 + 15b^2 + 6b - 6) - (8b^4 - 6b^3 - 2b^2 + 9b + 1)$$

$$(-17b^4 - 21b^3 + 15b^2 + 6b - 6) - (8b^4 - 6b^3 - 2b^2 + 9b + 1)$$

$$= \square$$

24.

Subtract the polynomials.

$$(6w^2 + 5wd - 3d^2) - (9w^2 - 3wd + 11d^2)$$

$$(6w^2 + 5wd - 3d^2) - (9w^2 - 3wd + 11d^2) = \square$$

25.

Subtract these polynomials.

$$(-mn + 6mp + 5np) - (4mn + 9mp - 3np)$$

$$(-mn + 6mp + 5np) - (4mn + 9mp - 3np) = \square$$

26.

Multiply and simplify.

$$g^3 \cdot g^6$$

The answer is

$$g^3 \cdot g^6 = \square.$$

(Type your answer as one base to a nonnegative power.)

27.

Multiply and simplify.

$$u^4 \cdot u^3 n$$

$$u^4 \cdot u^3 n = \square.$$

(Simplify your answer.)

28.

Simplify the expression.

$$(-10x^6 y^3)(4x^5 y^3)$$

$$(-10x^6 y^3)(4x^5 y^3) = \square$$

(Simplify your answer. Type positive exponents.)

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29.

Multiply.

$$(9e^4f^3g^4)(-4e^2f^4)$$

$$(9e^4f^3g^4)(-4e^2f^4) = \square$$

(Simplify your answer.)

30.

Multiply these monomials.

$$(3m^4n^6p^6)(-3m^4p)(m^3n^4p^2)$$

$$(3m^4n^6p^6)(-3m^4p)(m^3n^4p^2) = \square \text{ (Simplify your answer.)}$$

31.

Simplify the expression.

$$(c^2)^7$$

$$(c^2)^7 = \square$$

32.

Simplify.

$$(-c^6)^6$$

$$(-c^6)^6 = \square$$

33.

Simplify.

$$(3s^6)^2$$

$$(3s^6)^2 = \square$$

34.

Simplify the expression.

$$\left(\frac{1}{4}s^2t\right)^3$$

$$\left(\frac{1}{4}s^2t\right)^3 = \square$$

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35.

Simplify.

$$\left(\frac{1}{4}ab^4c^3\right)^4\left(\frac{1}{4}ab^4c^3\right)^2$$

$$\left(\frac{1}{4}ab^4c^3\right)^4\left(\frac{1}{4}ab^4c^3\right)^2 = \square$$

36.

Use the distributive property to rewrite this expression.

$$-6(n - 9)$$

Using the distributive property,

$$-6(n - 9) = \square.$$

37.

Multiply the polynomial by the monomial.

$$\frac{1}{8}m(2m - 5n)$$

$$\frac{1}{8}m(2m - 5n) = \square$$

(Simplify your answer.)

38.

Use the distributive property to find the product.

$$8y^2(7y^2 - 6y + 4)$$

$$8y^2(7y^2 - 6y + 4) = \square$$

(Simplify your answer.)

39.

Multiply the polynomial by the monomial.

$$4b^2\left(b^5 + \frac{1}{8}b^3 + \frac{1}{16}b^2 + \frac{1}{4}b - 2\right)$$

$$4b^2\left(b^5 + \frac{1}{8}b^3 + \frac{1}{16}b^2 + \frac{1}{4}b - 2\right) = \square$$

(Simplify your answer.)

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40.

Multiply.  
 $(x + 1)(x + 8)$

$(x + 1)(x + 8) = \square$   
(Simplify your answer.)

41.

Multiply.  
 $(x - 9)(x - 9)$

$(x - 9)(x - 9) = \square$   
(Simplify your answer.)

42.

Use the FOIL method to find the product.  
 $(3x - 4)(x - 8)$

The answer is  $\square$ .

43.

Multiply.  
 $(x^2 + x + 9)(x - 9)$

$(x^2 + x + 9)(x - 9) = \square$   
(Simplify your answer.)

44.

Multiply.  
 $(5x + 9)(9x^2 + 9x + 7)$

The answer is  $\square$ .  
(Simplify your answer.)

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45.

Multiply.

$$(s^2 + s - 1)(s^2 + 7s - 9)$$

$$(s^2 + s - 1)(s^2 + 7s - 9) = \square$$

(Simplify your answer.)

46.

Determine the conjugate of the binomial  $-3x + 7y$ .

What is the conjugate of  $-3x + 7y$ ?

- A.  $-3x - 7y$
- B.  $3x - 7y$
- C.  $3x + 7y$
- D.  $4xy$

47.

Find the product.

$$(r + 8)(r - 8)$$

Choose the product of  $(r + 8)(r - 8)$ .

- A.  $r^2 - 16r + 64$
- B.  $r^2 - 64$
- C.  $r^2 + 16r + 64$
- D.  $r^2 - 16r - 64$

48.

Multiply.

$$(3a + 2d)(3a - 2d)$$

$$(3a + 2d)(3a - 2d) = \square$$

(Simplify your answer.)

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49.

Multiply.

$$(-5c + 5)(-5c - 5)$$

$$(-5c + 5)(-5c - 5) = \square$$

(Simplify your answer.)

50.

Multiply.

$$(x + 9)^2$$

The answer is  $\square$ .

(Simplify your answer.)

51.

Square the binomial.

$$(9x + 7y)^2$$

The answer is  $\square$ .

(Simplify your answer.)

52.

Express using a positive exponent.

$$w^{-8}$$

$$w^{-8} = \square$$

(Simplify your answer. Type a positive exponent.)

53.

Divide and simplify.

$$\frac{5^2}{5^5}$$

$$\frac{5^2}{5^5} = \square$$

(Type answer in exponential notation using positive exponents.)

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54.

Simplify. Write your answer with a positive exponent.

$$\frac{t^{-9}}{t^3}$$

$$\frac{t^{-9}}{t^3} = \square$$

(Simplify your answer. Type exponential notation using positive exponents.)

55.

Divide and simplify.

$$\frac{g^3}{g^{-7}}$$

$$\frac{g^3}{g^{-7}} = \square$$

(Simplify your answer. Type exponential notation using positive exponents.)

56.

Simplify. Write your answer with a positive exponent.

$$\frac{k^{-4}}{k^{-8}}$$

$$\frac{k^{-4}}{k^{-8}} = \square$$

(Simplify your answer. Type exponential notation with positive exponents.)

57.

Divide and simplify.

$$\frac{36a^8}{6a^4}$$

$$\frac{36a^8}{6a^4} = \square$$

58.

Simplify the expression.

$$\frac{6s^3t^5}{-2st}$$

$$\frac{6s^3t^5}{-2st} = \square$$

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59.

Divide these monomials.

$$\frac{35a^4b^3c^4}{42a^7b}$$

$$\frac{35a^4b^3c^4}{42a^7b} = \square \text{ (Simplify your answer. Use positive exponents only.)}$$

60.

Divide the polynomial by the monomial.

$$\frac{4x + 8y}{4}$$

$$\frac{4x + 8y}{4} = \square$$

61.

Divide the polynomial by the monomial.

$$\frac{24x^4 - 54x^3}{6x}$$

The answer is  $\square$ .  
(Simplify your answer. Do not factor.)

62.

Divide and check.

$$\frac{54x^6 - 27x^5 + 45x}{9x}$$

The answer is  $\square$ .  
(Simplify your answer.)

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1. 1

2. B

3.  $\frac{36}{49}$

4.  $\frac{1}{p^6}$

5.  $-\frac{1}{729}$

6.  $-\frac{1}{49}$

7.  $\frac{y^4}{z^4}$

8.  $u^8$

9.  $\frac{3}{7} \frac{1}{5} \frac{7}{7}$

10.  $\frac{8}{5} \frac{4}{1} \frac{0}{8}$

11. 5

12.  $x^5 + 4x^4 + 7x^3 + x + 9$   
 $x^5$   
1

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13.  $x^9 + x^5$
14.  $20k^4 + 16k^3 - 23k^2 + 7k$
15.  $2b + 14d$
16.  $8v^2 + 24vp + 19p^2$
17.  $x^2 - 7x - 1$
18.  $11x^2 + 7x - 57$
19.  $-5x^4y^3 + 3x^3y^3 + 7x^3y^2 - 3xy^2 - 5xy$
20.  $2x - 2$
21.  $-12a^2 - 4a + 10$
22.  $-13v^2 - 4v + 12$
23.  $-25b^4 - 15b^3 + 17b^2 - 3b - 7$
24.  $-3w^2 + 8wd - 14d^2$
25.  $-5mn - 3mp + 8np$
26.  $g^9$
27.  $u^7 \cdot n$
28.  $-40x^{11}y^6$
29.  $-36e^6f^7g^4$
30.  $-9m^{11}n^{10}p^9$

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31.  $c^{14}$

32.  $c^{36}$

33.  $9s^{12}$

34.  $\frac{s^6 \cdot t^3}{64}$

35.  $\frac{1}{4096} a^6 b^{24} c^{18}$

36.  $-6n + 54$

37.  $\frac{1}{4}m^2 - \frac{5}{8}mn$

38.  $56y^4 - 48y^3 + 32y^2$

39.  $4b^7 + \frac{1}{2}b^5 + \frac{1}{4}b^4 + b^3 - 8b^2$

40.  $x^2 + 9x + 8$

41.  $x^2 - 18x + 81$

42.  $3x^2 - 28x + 32$

43.  $x^3 - 8x^2 - 81$

44.  $45x^3 + 126x^2 + 116x + 63$

45.  $s^4 + 8s^3 - 3s^2 - 16s + 9$

46. A

47. B

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48.  $9a^2 - 4d^2$

49.  $25c^2 - 25$

50.  $x^2 + 18x + 81$

51.  $81x^2 + 126xy + 49y^2$

52.  $\frac{1}{w^8}$

53.  $\frac{1}{5^3}$

54.  $\frac{1}{t^{12}}$

55.  $g^{10}$

56.  $k^4$

57.  $6a^4$

58.  $-3s^2t^4$

59.  $\frac{5b^2c^4}{6a^3}$

60.  $x + 2y$

61.  $4x^3 - 9x^2$

62.  $6x^5 - 3x^4 + 5$