

Online Homework System

Assignment Worksheet

5/18/14 - 7:27 PM

Name: _____

Class: _____

Class #: _____

Section #: _____

Instructor: Maple T.A. Administrator

Assignment: _____

Question 1: (1 point)

Write the polynomial in standard form, identify the degree of the polynomial, identify the leading coefficient, and then classify it according to its degree and number of terms.

$$2y - 3y^2 + 2y^3 + 3$$

Write the polynomial in standard form.

(a) $2y^3 + 2y - 3y^2 + 3$

(b) $-3y^2 + 2y^3 + 2y + 3$

(a) (c) $3 + 2y^3 - 3y^2 + 2y$

(d) $2y^3 - 3y^2 + 2y + 3$

(e) $2y^3 - 3y^2 + 3 + 2y$

(f) $3 + 2y + 2y^3 - 3y^2$

The degree of the polynomial is _____.

(b) The leading coefficient is _____.

This polynomial is a _____.

Question 2: (1 point)

Simplify.

$$(6a^4 + (4a + 6) - a^2) - (7a - (6a^3 - 4a^2 + 5a) - 8(a + 6))$$

Enter the expression in simplest form.

$$(6a^4 + (4a + 6) - a^2) - (7a - (6a^3 - 4a^2 + 5a) - 8(a + 6)) =$$

Question 3: (1 point)

Simplify.

$$(4x^2 - 7)(3x^2 + 3)$$

Enter the expression in simplest form.

$$(4x^2 - 7)(3x^2 + 3) =$$

Question 4: (1 point)

Simplify.

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

Enter the expression in simplest form.

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

Question 5: (1 point)

Simplify.

$$(\sqrt{11} z - 4 P^4)^3$$

- (a) $11\sqrt{11} z^3 - 132 z^2 P^4 - 48\sqrt{11} z P^8 + 64 P^{12}$
- (b) $11\sqrt{11} z^3 - 132 z P^4 - 48\sqrt{11} z P^8 - 64 P^{12}$
- (c) $11 \sqrt{11} z^3 - 132 z^2 P^4 + 48\sqrt{11} z P^8 - 64 P^{12}$
- (d) $11\sqrt{11} z^3 - 132 z^2 P^4 - 48\sqrt{11} z P^8 - 64 P^{12}$
-

Question 6: (1 point)

Factor completely.

$$9x^3 (y + 6) - 12x^2 (-6 - y) - 6x (y + 6)$$

Enter the factors. Enter the original expression if it cannot be factored.

$$9x^3 (y + 6) - 12x^2 (-6 - y) - 6x (y + 6) =$$

Question 7: (1 point)

Factor completely .

$$8y^3 + 3y^2 - 80y - 30$$

Enter the factors as a product of two binomials. Enter the original expression if it cannot be factored.

$$8y^3 + 3y^2 - 80y - 30 =$$

Question 8: (1 point)

Factor completely.

$$x^2 + x - 30$$

Enter the factors as a product of two binomials. Enter the original expression if it cannot be factored.

$$x^2 + x - 30 =$$

Question 9: (1 point)

Factor completely.

$$5s^6 - 13s^3t - 6t^2$$

Enter the factors as a product of two binomials. Enter the original expression if it cannot be factored.

$$5s^6 - 13s^3t - 6t^2 =$$

Question 10: (1 point)

Factor completely.

$$40y^2 + 14y - 12$$

Enter the factors. Enter the original expression if it cannot be factored.

$$40y^2 + 14y - 12 =$$

Question 11: (1 point)

Factor completely.

$$4t^2 - 12t + 9$$

Enter the factors. Enter the original expression if it cannot be factored.

$$4t^2 - 12t + 9 =$$

Question 12: (1 point)

Factor completely.

$$4t^2 + 12tx + 9x^2$$

Enter the factors. Enter the original expression if it cannot be factored.

$$4t^2 + 12tx + 9x^2 =$$

Question 13: (1 point)

Factor completely.

$$4m^6 - 9w^2$$

Enter the factors as a product of two binomials. Enter the original expression if it cannot be factored.

$$4m^6 - 9w^2 =$$

Question 14: (1 point)

Factor completely.

$$4w^6 + 9m^2$$

Enter the factors as a product of two binomials. Enter the original expression if it cannot be factored.

$$4w^6 + 9m^2 =$$

Question 15: (1 point)

Factor completely.

$$27x^3 + 1$$

Enter the factors. Enter the original expression if it cannot be factored.

$$27x^3 + 1 =$$

Question 16: (1 point)

Factor completely.

$$343t^3z^9 - 8s^3$$

Enter the factors. Enter the original expression if it cannot be factored.

$$343t^3z^9 - 8s^3 =$$

Question 17: (1 point)

Solve.

$$x^2 = -8x - 15$$

If there are multiple solutions, separate the answers with semicolons (;).

$$x = \underline{\hspace{2cm}}$$

Question 18: (1 point)

Solve.

$$7x^2 - 9x = -2$$

If there are multiple solutions, separate the answers with semicolons (;).

$x =$ _____

Question 19: (1 point)

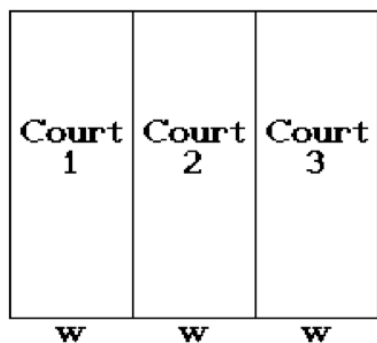
Find the discriminant and identify the best description of the equation's root(s).

$$3z^2 + \sqrt{11}z = 5z^2 + 2$$

- (a) 2 real solutions
 - (b) 1 real solution
 - (c) 1 complex solution
 - (d) 1 real and 1 complex root
 - (e) 2 complex solutions
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Question 20: (1 point)

At a tennis club, a $14,850 \text{ ft}^2$ rectangular area is partitioned into three rectangular courts of equal size. A total of 760 feet of fencing is used to enclose the three courts, including the interior sides.



What are the possible dimensions, in feet, of the entire rectangular area?

Select all that apply.

- (a) 55 feet by 135 feet
- (b) 90 feet by 165 feet
- (c) 270 feet by 55 feet
- (d) 110 feet by 135 feet
- (e) 27.5 feet by 540 feet

Question 21: (1 point)

A ladder of length $4x + 1$ feet is positioned against a wall such that the bottom is $x - 1$ feet away from a wall. The distance between the floor and the top of the ladder is $4x$ feet.

Find the length, in feet, of the ladder.

Assume that a right angle is formed by the wall and the floor.

The length of the ladder is _____ feet.

Question 22: (1 point)

A small rock sits on the edge of a tall building. A strong wind blows the rock off the edge. The distance, in feet, between the rock and the ground t seconds after the rock leaves the edge is given by $d = -16t^2 - 7t + 500$.

If the answer is not an integer, enter it as a decimal. Round to the nearest hundredth, if needed.

How many seconds after the rock leaves the edge is it 458 feet from the ground?

_____ seconds

How many seconds after the rock leaves the edge does it hit the ground?

_____ seconds
