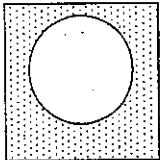


Directions: Show all your steps in the space provided below each problem then write your answers in the boxes on the right.

1) Write the polynomial in standard form: $x - 6x^2 - 3$	2) Name the polynomial based on its degree: $7 - 8x^2 + 6a$	3) Name the polynomial based on the number of terms: $x + 2$	Answers
For problems (4– 8) Simplify and write each answer in standard form.			1.
4) $(3x^2 - 5x) - (x^2 + 4x + 3)$	5) $(3y^3 - 11y + 3) - (5y^3 + y^2 + 2)$	6) $(3x + x^2 - x^3) - (x^3 + 2x^2 + 5x)$	2.
7) Simplify: $-x^2(-2x^2 + 3x - 2)$	8) Simplify: $4(x^2 - 3) + x(x + 1)$	9) Find the GCF: $8d^3 + 4d^2 + 12d$	3.
10) Factor: $6h^2 - 8h$	11) Factor: $4x^3 + 12x^2 + 16x$	12) Factor: $6y^4 + 9y^3 - 27y^2$	4.
<p>13) A circular pond will be placed on a square piece of land. The length of the side of the square is $2x$. The radius of the pond is x. The part of the square not covered by the pond will be planted with flowers. What is the area of the region that will be planted with flowers? Write your answer in factored form.</p> 	14) Simplify, write your answer in standard form: $(x + 3)(2x - 5)$	5.	
			6.
			7.
			8.

Answers

15) Simplify, write your answer in standard form:
 $(x - 7)(x + 4)$

16) Simplify, write your answer in standard form:

$$(x + 6)(x^2 - 4x + 3)$$

15.

17) Simplify, write your answer in standard form:
 $(2x^2 + 5x - 3)(2x + 1)$

18) Simplify, write your answer in standard form:

$$(2x - 1)(7x + 1)$$

16.

17.

19) The width of a rectangular painting is 3 in. more than twice the height. A frame that is 2.5 in. wide goes around the painting.

A) Write an expression for the combined area of the painting and frame in standard form.

B) Use the expression to find the combined area when the height of the painting is 12 in. Don't forget to use the correct units in your answer.

C) Use the expression to find the combined area when the height of the painting is 15 in. Don't forget to use the correct units in your answer.

18.

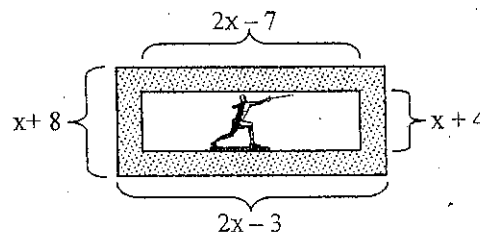
19.

A _____

B _____

C _____

20) The Cutting Edge frame shop makes a mat by cutting out the inside of a rectangular board. Use the diagram to find the length and width of the original board if the area of the mat is 184 in^2 .

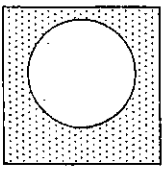


20.

Width _____

Length _____

Directions: Show all your steps in the space provided below each problem then write your answers in the boxes on the right.

1) Write the polynomial in standard form: $x - 6x^2 - 2x^3$	2) Name the polynomial based on its degree: $7 - 8x$	3) Name the polynomial based on the number of terms: $x + 2x^2 + 3$	Answers
For problems (4- 8) Simplify and write each answer in standard form.			1.
4) $(3x^2 - 5x) + (x^2 + 4x + 3)$	5) $(3y^3 - 11y + 3) - (2y^3 + y^2 + 4)$	6) $(4x + x^2 - x^3) - (x^3 + 5x^2 + 5x)$	2.
7) Simplify: $-2x^2(-2x^2 + 3x - 2)$	8) Simplify: $3(x^2 - 3) + x(x + 1)$	9) Find the GCF: $18d^3 + 24d^2 + 12d$	3.
10) Factor: $16h^2 - 28h$	11) Factor: $24x^3 + 12x^2 + 36x$	12) Factor: $9y^4 + 18y^3 - 27y^2$	4.
<p>13) A circular pond will be placed on a square piece of land. The length of the side of the square is $3x$. The radius of the pond is x. The part of the square not covered by the pond will be planted with flowers. What is the area of the region that will be planted with flowers? Write your answer in factored form.</p> 			<p>14) Simplify, write your answer in standard form: $(x + 5)(2x - 3)$</p>
			5.
			6.
			7.
			8.

Answers

15) Simplify, write your answer in standard form:
 $(x - 6)(x + 3)$

16) Simplify, write your answer in standard form:
 $(x + 6)(x^2 - 2x + 3)$

15.

17) Simplify, write your answer in standard form:
 $(2x^2 + 3x - 1)(2x + 1)$

18) Simplify, write your answer in standard form:
 $(2x - 1)(-7x + 1)$

16.

17.

19) The width of a rectangular painting is 4 in. more than twice the height. A frame that is 2.5 in. wide goes around the painting.

A) Write an expression for the combined area of the painting and frame in standard form.

B) Use the expression to find the combined area when the height of the painting is 12 in. Don't forget to use the correct units in your answer.

C) Use the expression to find the combined area when the height of the painting is 15 in. Don't forget to use the correct units in your answer.

18.

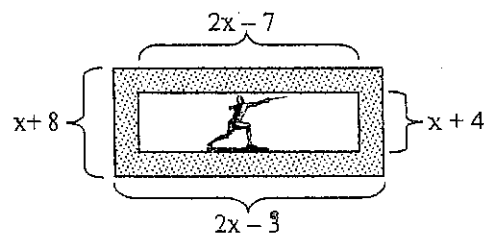
19.

A _____

B _____

C _____

20) The Cutting Edge frame shop makes a mat by cutting out the inside of a rectangular board. Use the diagram to find the length and width of the original board if the area of the mat is 196 in^2 .



20.

Width _____

Length _____