

Mid Chapter Quiz

1. Classify each polynomial according to its degree and type.

| | Monomial | Binomial | Trinomial |
|----------|----------|----------|-----------|
| Degree 1 | 1 | 2 | 3 |
| Degree 2 | 4 | 5 | 6 |
| Degree 3 | 7 | 8 | 9 |

⌘ $-9x$

⌘ $5 - 2x^3$

⌘ $4x^3$

⌘ $-4x^2$

⌘ $x + 6$

⌘ $3x^2 + 3x^3 - 10$

⌘ $4x^2 - x$

⌘ $x - 3x^2 + 1$

Correct answers:

1 $-9x$

2 $x + 6$

3 No correct answers set

4 $-4x^2$

5 $4x^2 - x$

6 $x - 3x^2 + 1$

7 $4x^3$

8 $5 - 2x^3$

9 $3x^2 + 3x^3 - 10$

2. Find the sum. Write your answer in standard form.

$$(6x^3 + 3x^2 + 3) + (2x^3 - 5x + 1)$$

The sum is

Correct answers:

1 $8x^3 + 3x^2 - 5x + 4$

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3. Find the difference. Write your answer in standard form.

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

The difference is

Correct answers:

1 $5x^3 - 2x^2 + x - 2$

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4. Find $(2x + 1)(x - 2)$ using the table of products. Write your answer in standard form.

| | $2x$ | 1 |
|------------------------|------------------------|------------------------|
| x | 1 <input type="text"/> | 2 <input type="text"/> |
| 3 <input type="text"/> | 4 <input type="text"/> | 5 <input type="text"/> |

The product is 6 .

Correct answers:

- 1 $2x^2$ 2 x 3 -2 4 $-4x$ 5 -2
6 $2x^2 - 3x - 2$

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5. Find $(x + 4)(x^2 + x - 2)$. Write your answer in standard form.

The product is 1 .

Correct answers:

- 1 $x^3 + 5x^2 + 2x - 8$

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6. Identify each product.

$(x + 2y)^2$ 1

$(y + 2x)^2$ 2

$2x^2 + 4xy + 4y^2$ $2y^2 + 4xy + 4x^2$ $2x^2 + 4xy + 2y^2$

$x^2 + 4xy + 4y^2$ $y^2 + 4xy + 4x^2$

Correct answers:

1 $x^2 + 4xy + 4y^2$ 2 $y^2 + 4xy + 4x^2$

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7. Which expression is equivalent to $(4 - 2x)(4 + 2x)$?

- $(16 - 2x)^2$
- $(16 + 2x)^2$
- $4 - 4x^2$
- $16 - 4x^2$ ✓
- $16 - 8x + 4x^2$
- $16 - 8x - 4x^2$
- $16 - 16x - 4x^2$

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8. Solve $7x^2 = 28x$.

The roots are $x =$ and $x =$.

Correct answers:

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9. Solve $x^2 + 5 = 21$.

The roots are $x =$ and $x =$.

Correct answers:

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10. The path of a ball kicked from the ground can be modeled by the equation $y = -\frac{1}{4}(x - 2)(x - 22)$, where x and y are measured in feet. The x -axis represents the ground. How far does the ball land from where it is kicked?

The ball lands feet from where it is kicked.

Correct answers:

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