

Multiple Choice:

Write the letter of your choice in the space provided. **1 pt each.**

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.

Free Response:

Show all work for credit. Write your final answer in the space provided. **5 pts each unless otherwise indicated.**

11. What is the degree of the polynomial? $2x^3 - 5x^2 + 7x$ Degree: _____ Is the polynomial a monomial, binomial, trinomial, or none of these? (Circle your choice)	12. Simplify $(3x^2 - 5x + 4) + (2x^2 - x - 7)$
13. Simplify $(4x^2 - 7x + 5) - (7x^2 - 2x + 1)$	14. Simplify $2x^2(3x^2 - 4x + 5)$
15. Simplify $(x - 3)(2x + 7)$	16. Simplify $(x + 2)(x^2 + 2x - 4)$
17. Simplify $(x - 3)^2$	18. Simplify $(3x + 2)(3x - 2)$

Multiple Choice

1. A moving company sells boxes for packing items. The large box has a volume of $6x^2 + 2x + 3$ cubic units. The medium box has a volume of $2x^2 - 5$ cubic units. A customer purchases two large boxes and one medium box. What is the total volume of the purchased boxes?

- A. $12x^2 + 4x - 2$ cubic units
C. $14x^2 + 2x - 2$ cubic units

- B. $14x^2 + 4x + 1$ cubic units
D. $14x^2 - x + 6$ cubic units

2. What is the product of the binomials: $(r - 8)(r + 5)$?

- A. $r^2 - 40$
C. $r^2 + 13r - 40$

- B. $r - 3$
D. $r^2 - 3r - 40$

3. What is the simplified form of $(b + 7)^2$?

- A. $b^2 + 14b + 49$
C. $b^2 + 49$

- B. $b^2 + 49b + 49$
D. $b + 49$

4. Which of the following expressions is equivalent to the expression $\frac{1}{2}(x - 4)^2 + 6$?

- A. $x + 2$
C. $\frac{1}{2}x^2 - 2$

- B. $\frac{1}{4}x^2 - 2x + 10$
D. $\frac{1}{2}x^2 - 4x + 14$

5. Select all of the expressions that are equivalent to $-x^2 + 3x + 10$.

I.	$(x + 5)(x - 2)$
II.	$-(x + 2)(x - 5)$
III.	$(-x - 2)(x - 5)$
IV.	$(x + 2)(5 - x)$

- A. I only
C. II only

- B. II and III
D. II, III, and IV

6. What is the simplified form of $(-3b + 7)^2$?

- A. $9b^2 - 42b + 49$
- C. $9b^2 + 49$

- B. $-9b^2 - 42b + 49$
- D. $-9b^2 + 49$

7. Find an equivalent form of $2(b + 7)^2$?

- A. $2b + 14$
- C. $2b^2 + 28b + 98$

- B. $2b^2 + 98$
- D. $4b^2 + 56b + 196$

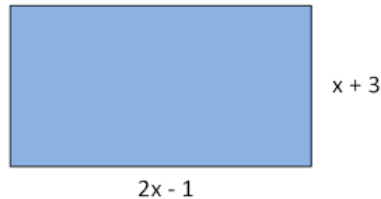
8. If the length of a rectangle in terms of x is $5x^2 + 4x - 2$, and its width is $3x^2 + 2x + 8$, what is the perimeter of this rectangle?

- A. $5(4x^2 + 3x + 3)$
- C. $4(4x^2 + 12x + 12)$

- B. $4(4x^2 + 3x + 3)$
- D. $4(4x^2 + 12x + 3)$

9. What is the expression that represents the area of the rectangle?

- A. $2x^2 + 5x - 3$
- B. $6x + 4$
- C. $2x^2 - 5x - 3$
- D. $2x^2 + 7x - 3$



10. Match the expression with its name: $6x^3 - 9x + 3$

- A. cubic trinomial
- C. quadratic binomial

- B. fourth-degree monomial
- D. not a polynomial