

# Polynomial Quiz Form A

Name \_\_\_\_\_

Period \_\_\_\_\_

For problems 1-4, simplify each polynomial expression.  
Write your answer on the line to the right.

1.  $(3x^4 + 3x^2 - 8) + (2x^4 + 3x^3 + 12)$

1) \_\_\_\_\_

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

2) \_\_\_\_\_

3.  $(4x^3 + 3x^2 - 7) - (x^2 + x - 5)$

3) \_\_\_\_\_

4.  $(5x^4 + x^2 - x + 13) - (2x^4 - 2x^2 + x - 5)$

4) \_\_\_\_\_

For numbers 5-10, multiply each polynomial expression.  
Write your answer on the line to the right.

5.  $x(3x + 5)$

5) \_\_\_\_\_

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

6) \_\_\_\_\_

7.  $(x - 5)(x + 3)$

7) \_\_\_\_\_

8.  $(x - 5)(2x - 5)$

8) \_\_\_\_\_

9.  $(x + 3)^2$

9) \_\_\_\_\_

10.  $(2x - 3)(2x + 3)$

10) \_\_\_\_\_

For problems 11-20, factor each polynomial expression completely.

Write your answer on the line to the right.

11.  $3x + 9$

11) \_\_\_\_\_

12.  $3x^3 - 6x + 12x$

12) \_\_\_\_\_

13.  $5x^3 + 5$

13) \_\_\_\_\_

14.  $x^2 - 9$

14) \_\_\_\_\_

15.  $x^2 + 6x + 9$

15) \_\_\_\_\_

16.  $x^2 + 10x + 25$

16) \_\_\_\_\_

17.  $x^2 - 6x + 9$

17) \_\_\_\_\_

Keep going...

18.  $x^2 - 2x - 15$

18) \_\_\_\_\_

19.  $x^2 + 8x + 12$

19) \_\_\_\_\_

20.  $2x^2 - 9x + 10$

20) \_\_\_\_\_

For numbers 21-25, solve each equation.

Put BOTH of your answers on the line to the right.

21.  $(x + 6)(x - 5) = 0$

21) \_\_\_\_\_

22.  $(3x - 4)(x - 5) = 0$

22) \_\_\_\_\_

23.  $x^2 - 2x - 15 = 0$

23) \_\_\_\_\_

24.  $2x^2 - 9x + 9 = 0$

24) \_\_\_\_\_

25.  $x^2 + 5x + 9 = 5$

25) \_\_\_\_\_