Group Review Assignment (Chapter 6)

Name_____

MULTIPLE CHOICE. Choose the answer that best completes the statement or answers the question. Clearly write your choice in the blank provided. There is only one answer per question. You may write on this test. If a question appears to not have instructions, the instructions for the previous question apply. Good luck and have fun!

Factor the four–term polynomial by grouping.

1) $20x^6 - 12x^3 + 15x^3 - 9$ 1) _____

A) $(4x^3 + 3)(5x^3 - 3)$
B) $(20x^3 - 3)(x^3 + 3)$
C) $(4x^6 + 3)(5x - 3)$
D) $(4x^3 - 3)(5x^3 + 3)$

Factor the trinomial completely. If the polynomial cannot be factored, write "prime."

2) $4x - 21 + x^2$ 2) _____

A) $(x - 7)(x + 1)$
B) $(x - 7)(x + 3)$
C) $(x + 7)(x - 3)$
D) prime

Factor completely.

3) $6y^2 + 27y - 15$ 3) _____

A) $3(2y - 1)(y + 5)$
B) $3(2y + 1)(y - 5)$
C) prime
D) $(6y - 3)(y + 5)$

Factor the polynomial by grouping.

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

A) $(x + 2)(3x - 2)$
B) $(2x^2 + 2)(x^2 - 3)$
C) prime
D) $(x^2 + 2)(2x^2 - 3)$

Factor the trinomial by grouping (called the AC method in Class Notes).

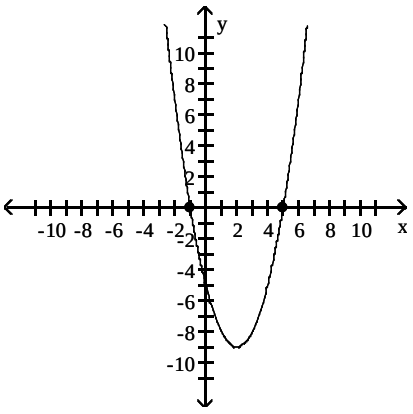
5) $15y^2 - 22y + 8$ 5) _____

A) $(3y + 2)(5y + 4)$
B) $(3y - 2)(5y - 4)$
C) $(15y + 2)(y + 4)$
D) prime

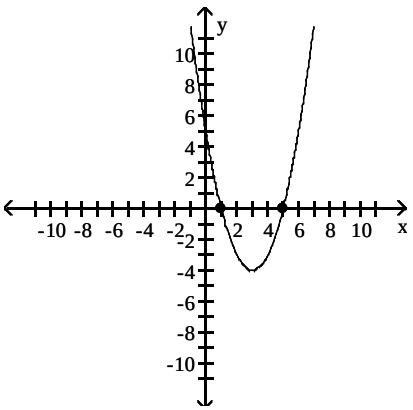
Match the equation with its graph. Hint: Find the x intercepts using algebra and compare them to the graphs.

6) $y = (x - 1)(x + 5)$ 6) _____

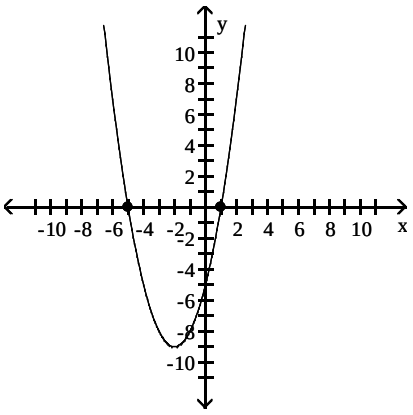
A)



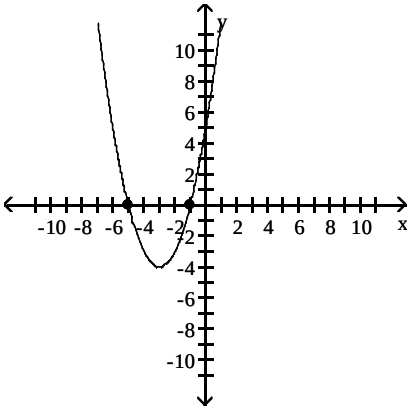
B)



C)



D)



Find the x–intercepts of the graph of the following equation.

7) $y = 4x^2 + 4x$ 7) _____

A) $(-1, 0)$, $(0, 0)$
B) $(0, 0)$
C) $(-1, 0)$
D) $(-1, 0)$, $(4, 0)$

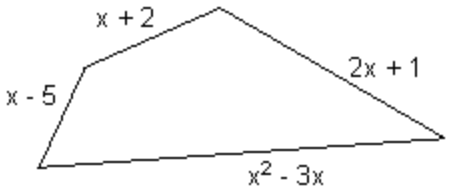
Represent each given condition using a single variable, x.

8) The base and height of a triangle whose height is six less than nine times its base. 8) _____

A) height = x; base = 6x – 9
B) base = x; height = 9x – 6
C) height = x; base = 9x – 6
D) base = x; height = 6x – 9

Solve.

9) The perimeter of the quadrilateral is 88 inches. Find the lengths of the sides. 9) _____



A) 11 in., 19 in., 54 in., 4 in.
B) 3 in., 3 in., –2 in., –4 in.
C) 12 in., 21 in., 70 in., 5 in.
D) 10 in., 20 in., 54 in., 4 in.

Factor the sum or difference of two cubes.

10) $x^3 - 343$ 10) _____

A) $(x + 7)(x^2 - 7x + 49)$
B) $(x - 7)(x^2 + 7x + 49)$
C) $(x - 7)(x^2 + 49)$
D) $(x + 343)(x + 1)(x - 1)$

Answer Key
Testname: 116_GRP_REV_ASS_CH6

1) A
2) C
3) A
4) D
5) B
6) C
7) A
8) B
9) A
10) B