Name _____

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Date _____

Algebra II

Identities

1. Solve for a: $x^2 + 6x + 8 = (x+2)(x+a)$

2. Solve for h: $(x-6)^2 - h = x^2 - 12x + 40$

3. Solve for m and p: $(x-m)(px+3) = 2x^2 - 9x - 18$

4. Solve for a and b: $(x^2+a)(x+b) = x^3 + x^2 + 3x + 3$

5. Solve for h and k: $3x^3 - 8x^2 + 13 = (3x^2 + hx - 4)(x - 2) + k$

6. Algebraically determine the values of h and k to correctly complete the identity stated below.
$2x^3 - 10x^2 + 11x - 7 = (x - 4)(2x^2 + hx + 3) + k$

7. Algebraically determine the values of h and k to correctly complete the identity stated below.
$x^3 - 8x^2 + 5x + 53 = (x - 5)^2(x + h) + k$

8. Solve for a and b: $(x + a)(x^2 - 3x + b) = x^3 - x^2 - 5x + 2$