

Factor each quadratic completely, some may not be factorable.

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

$$x(3x-2)(x-1)$$

3.  $7x^2 + 9x$

$$x(7x+9)$$

5.  $9x^2 - 5x - 10$

Not Factorable

7. Look back at problem #1, set the factored form equal to zero. What are the possible values of x?

$$x(3x-2)(x-1)=0$$

$$x=0, x=\frac{2}{3}, x=1$$

8. Look back at problem #2, set the factored form equal to zero. What are the possible values of x?

$$(7x+10)(x-6)=0$$

$$x=6 \quad \downarrow \quad x=-\frac{10}{7}$$

2.  $7x^2 - 32x - 60$

$$(7x+10)(x-6)$$

4.  $x^2 - 7x - 18$

$$(x+2)(x-9)$$

6.  $16m^2 + 24m + 9$

$$(4m+3)^2$$