

**4.6: Completing the Square****Solve these Quadratic Equations.**

1)  $s^2 = 169$

2)  $x^2 = 84$

3)  $4p^2 = 448$

4)  $7r^2 - 10 = 25$

5)  $\frac{t^2}{20} + 8 = 15$

6)  $4(x-1)^2 = 8$

7)  $2(x+2)^2 - 5 = 8$

**Solve using Completing the Square. Show all steps.**

8)  $x^2 - 6x = -4$

9)  $x^2 + 2x = 7$

10)  $2x^2 - 8x = 22$

11)  $3x^2 + 6x = 1$

12)  $2x^2 + 8x - 15 = 0$

13)  $x^2 + 10x = -29$

**Convert these standard form equations to vertex form. Show all steps.**

14)  $f(x) = x^2 - 4x + 13$

15)  $g(x) = x^2 + 14x + 71$

16)  $h(x) = 9x^2 + 18x - 3$

17)  $f(x) = x^2 + 4x - 7$

18)  $g(x) = x^2 - 16x + 2$

19)  $h(x) = 2x^2 + 6x + 25$