

# Honors Algebra II

## Notes Section 14

### Solving $ax^2+bx+c=0$ by Factoring

#### EXAMPLE 1 Factor.

a)  $5x^2-17x+6$

b)  $3x^2+20x-7$

c)  $7x^2-20x-3$

d)  $5z^2+16z+3$

e)  $2u^2+u+3$

f)  $3x^2+5x-12$

#### EXAMPLE 2 Factor.

a)  $9x^2-64$

b)  $4y^2+20y+25$

c)  $36w^2-12w+1$

d)  $16x^2-1$

e)  $25s^2-80s+64$

f)  $36n^2-9$

**EXAMPLE 3 Factor.**

a)  $5x^2-45$

b)  $6x^2-14x+8$

c)  $-5z^2+20z$

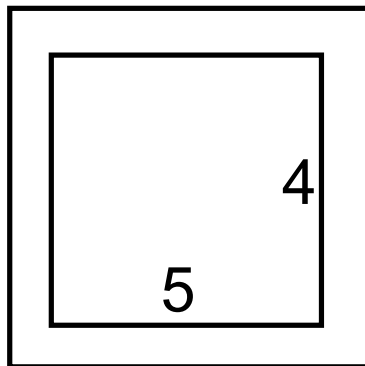
**EXAMPLE 4 Solve.**

a)  $3x^2+10x-8=0$

b)  $5p^2-16p+15=4p-5$

c)  $12x^2+7x+2=x+8$

**EXAMPLE 5** What should the width of the border be if you have  $10\text{ft.}^2$



**EXAMPLE 5** A magazine has 28,000 subscribers when it charges \$10/subscription. For each \$1 increase, the magazine loses 2000 subscribers. How much should the magazine charge to maximize revenue? What is the maximum revenue?

$$\text{Revenue} = \# \text{ of Subscribers} \quad \times \quad \text{Subscription } \$$$