

## Section 5.5 Focus Exercises

1. Factor each trinomial. You may do so in one step.

a)  $x^2 - 12x - 32$

b)  $x^2 - 14x + 40$

c)  $x^2 + 15x + 36$

d)  $x^2 - 12x + 32$

e)  $x^2 + 8x + 12$

f)  $x^2 - 9x + 20$

g)  $x^2 + 11x + 28$

h)  $x^2 - 10x + 21$

i)  $x^2 + 2x - 48$

j)  $x^2 - 3x - 10$

k)  $x^2 + 3x - 18$

l)  $x^2 - 4x - 77$

m)  $x^2 - 16x + 64$

n)  $x^2 + 7x + 49$

o)  $x^2 + 5x - 50$

p)  $x^2 - x - 42$

2. Factor each trinomial using the ideas developed in this section. If the trinomial is a perfect square trinomial, then write the factorization as (binomial)<sup>2</sup>. If a trinomial is not factorable, then write “prime.”

a)  $x^2 + 14x + 49$

b)  $x^2 + 22x + 121$

c)  $x^2 - 2x + 1$

d)  $x^2 - 4x + 4$

e)  $x^2 - 15x + 36$

f)  $x^2 - 8x + 64$

g)  $x^2 + 14x - 49$

h)  $x^2 + 6x - 16$

i)  $x^2 + 10x + 9$

j)  $x^2 - 4x - 16$

3. First, determine if the trinomial is a perfect square. If it is, then write the factorization as (binomial)<sup>2</sup>. If it not a perfect square, factor it using the method shown in Section 5.4. If a trinomial is not factorable, then write “prime.”

a)  $16x^2 + 8x + 1$

b)  $9x^2 + 6x + 1$

c)  $4x^2 - 20x + 25$

d)  $9x^2 - 15x + 4$

e)  $64x^2 - 16x + 1$

f)  $25x^2 - 5x + 1$