

2.)	$(v-4)(v+1)$	14.)	prime $\{8 \pm 2\sqrt{26}\}$	26.)	$(1+17c)(1-2c)$
4.)	$(x+4)(x-2)$	16.)	$(z+9)(z-8)$	28.)	$(a+12b)(a-7b)$
6.)	prime	18.)	$(r-22s)(r+2s)$	30.)	$(1-20mn)(1+5mn)$
8.)	$(a-8)(a+3)$	20.)	$(x-9y)(x+7y)$	32.)	$(n+25)(n-16)$
10.)	$(p+7)(p-2)$ $\{ -9, 2 \}$	22.)	$(m+8n)(m-7n)$	34.)	$(a-40)(a+20)$
12.)	$(y-8)(y+4)$ $\{ 8, -4 \}$	24.)	$(a+3b)(a-16b)$		

12) $y^2 - 4y - 32 = 0$ (8, -4)

$$y = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(-32)}}{2(1)}$$

$$y = \frac{4 \pm \sqrt{16 + 128}}{2} = \frac{4 \pm \sqrt{144}}{2}$$

$$= \frac{4 \pm 12}{2} = \frac{16}{2} \text{ or } \frac{-8}{2}$$

→ $\{8, -4\}$

14) $t^2 - 16t - 40$ (4, 10, 2, 5)

$$t = \frac{-(-16) \pm \sqrt{(-16)^2 - 4(1)(-40)}}{2(1)}$$

$$t = \frac{16 \pm \sqrt{256 + 160}}{2} = \frac{16 \pm \sqrt{416}}{2}$$

$$= \frac{16 \pm \sqrt{16 \cdot 26}}{2} = \frac{16 \pm 4\sqrt{26}}{2}$$

reduce by 2
 $\{8 \pm 2\sqrt{26}\}$

34) $-800 - 20a + a^2$ (130, 10, 40, 20)

$$a^2 - 20a - 800$$

$$(a + 20)(a - 40)$$

30) $1 - 15mn - 100m^2n^2$ (10, 10, 20, 5)

$$(1 + 5mn)(1 - 20mn)$$

32) $n^2 + 9n - 400$ (40, 10, 20, 20)

$$(n + 25)(n - 16)$$

10) $p^2 + 7p - 18$

$$p = \frac{-7 \pm \sqrt{7^2 - 4(1)(-18)}}{2(1)} = \frac{-7 \pm \sqrt{49 + 72}}{2}$$

$$= \frac{-7 \pm \sqrt{121}}{2} = \frac{-7 \pm 11}{2} = \frac{4}{2} \text{ or } \frac{-18}{2}$$

$\{-9, 2\}$ $\{2, -9\}$