31. $x^2 - 10x = -13$

$x^2 - 10x + 25 = -13 + 25$

$(x-5)^2 = 12$

$\sqrt{(x-5)^2} = \pm\sqrt{12}$

$x - 5 = \pm 2\sqrt{3}$

$x = 5 \pm 2\sqrt{3}$

you only needed to try the even prob. but I did all so that if you wanted to try any others you could.

32. $u^2 - 4u = 2u + 35$

$u^2 - 4u - 2u = 35$

$(u^2 - 6u + 9) = 35 + 9$

$(u-3)^2 = 44$

$\sqrt{(u-3)^2} = \pm\sqrt{44}$

$u - 3 = \pm 2\sqrt{11}$

$u = 3 \pm 2\sqrt{11}$

33. $v^2 - 17v = 13v - 63$

$v^2 - 30v = -63$

$v^2 - 30v + 225 = -63 + 225$

$(v-15)^2 = 162$

$\sqrt{(v-15)^2} = \pm\sqrt{162}$

$v - 15 = \pm 9\sqrt{2}$

$v = 15 \pm 9\sqrt{2}$

34. $k^2 - 9k + 20 = 0$

$k^2 - 9k + \frac{81}{4} = -20 + \frac{81}{4}$

$\frac{1}{4}$ $\frac{80}{4}$

$\sqrt{\left(k - \frac{9}{2}\right)^2} = \sqrt{\frac{1}{4}}$

$k - \frac{9}{2} = \pm\frac{1}{2}$

$k - \frac{9}{2} + \frac{1}{2} = \frac{10}{2} = 5$

$k - \frac{9}{2} - \frac{1}{2} = \frac{8}{2}$ 4