

Solve.

a. $m^2 - 16 = 0$

b. $w^2 - 25 = 0$

c. $2n^2 - 32 = 0$

d. $3g^2 - 27 = 0$

e. $q^2 + 4 = 0$

f. $4k^2 - 64 = 0$

g. $2h^2 + 50 = 0$

h. $2s^2 = 8$

i. $5e^2 - 125 = 0$

j. $6u^2 - 216 = 0$

KEYS

a. $m^2 - 16 = 0$

$$m^2 - 16 = 0 \Rightarrow m^2 = 16 \Rightarrow m = \pm\sqrt{16} \Rightarrow m = \pm 4$$

$m = -4$ or $m = 4$

b. $w^2 - 25 = 0$

$$w^2 - 25 = 0 \Rightarrow w^2 = 25 \Rightarrow w = \pm\sqrt{25} \Rightarrow w = \pm 5$$

$w = -5$ or $w = 5$

c. $2n^2 - 32 = 0$

$$2n^2 - 32 = 0 \Rightarrow 2n^2 = 32 \Rightarrow n^2 = \frac{32}{2} \Rightarrow n^2 = 16$$

$$n = \pm\sqrt{16} \Rightarrow n = \pm 4$$

$n = -4$ or $n = 4$

d. $3g^2 - 27 = 0$

$$3g^2 - 27 = 0 \Rightarrow 3g^2 = 27 \Rightarrow g^2 = \frac{27}{3} \Rightarrow g^2 = 9$$

$$g = \pm\sqrt{9} \Rightarrow g = \pm 3$$

$g = -3$ or $g = 3$

e. $q^2 + 4 = 0$

$$q^2 + 4 = 0 \Rightarrow q^2 = -4 \Rightarrow q = \pm\sqrt{-4} \Rightarrow \text{No real solution}$$

f. $4k^2 - 64 = 0$

$$4k^2 - 64 = 0 \Rightarrow 4k^2 = 64 \Rightarrow k^2 = \frac{64}{4} \Rightarrow k^2 = 16$$

$$k = \pm\sqrt{16} \Rightarrow k = \pm 4$$

$$k = -4 \text{ or } k = 4$$

g. $2h^2 + 50 = 0$

$$2h^2 + 50 = 0 \Rightarrow 2h^2 = -50 \Rightarrow h^2 = \frac{-50}{2} \Rightarrow h^2 = -25$$

$$h = \pm\sqrt{-25} \Rightarrow \text{No real solution}$$

h. $2s^2 = 8$

$$2s^2 = 8 \Rightarrow s^2 = \frac{8}{2} \Rightarrow s^2 = 4$$

$$s = \pm\sqrt{4} \Rightarrow s = \pm 2$$

$$s = -2 \text{ or } s = 2$$

i. $5e^2 - 125 = 0$

$$5e^2 - 125 = 0 \Rightarrow 5e^2 = 125 \Rightarrow e^2 = \frac{125}{5} \Rightarrow e^2 = 25$$

$$e = \pm\sqrt{25} \Rightarrow e = \pm 5$$

$$e = -5 \text{ or } e = 5$$

j. $6u^2 - 216 = 0$

$$6u^2 - 216 = 0 \Rightarrow 6u^2 = 216 \Rightarrow u^2 = \frac{216}{6} \Rightarrow u^2 = 36$$

$$u = \pm\sqrt{36} \Rightarrow u = \pm 6$$

$$u = -6 \text{ or } u = 6$$