

p. 655) # 3-13 odd, 15, 16, 29

③ ± 1

⑤ ± 10

⑦ 0

⑨ $\pm \frac{1}{2}$

⑪ $\pm \frac{7}{3}$

⑬ 0

⑮ A

⑯ C

⑲ D

Solutions

$$\begin{aligned} \textcircled{3} \quad 3x^2 - 3 &= 0 \\ +3 \quad +3 \\ \hline 3x^2 &= 3 \\ \frac{3x^2}{3} &= \frac{3}{3} \\ \sqrt{x^2} &= \sqrt{1} \\ x &= \boxed{\pm 1} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 4x^2 - 400 &= 0 \\ +400 \quad +400 \\ \hline 4x^2 &= 400 \\ \frac{4x^2}{4} &= \frac{400}{4} \\ \sqrt{x^2} &= \sqrt{100} \\ x &= \boxed{\pm 10} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad 15d^2 &= 0 \\ \frac{15d^2}{15} &= \frac{0}{15} \\ \sqrt{d^2} &= \sqrt{0} \\ d &= \boxed{0} \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad 4g^2 + 10 &= 11 \\ -10 \quad -10 \\ \hline 4g^2 &= 1 \\ \frac{4g^2}{4} &= \frac{1}{4} \\ \sqrt{g^2} &= \sqrt{\frac{1}{4}} \\ g &= \frac{\sqrt{1}}{\sqrt{4}} \\ g &= \boxed{\pm \frac{1}{2}} \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad 9q^2 - 35 &= 14 \\ +35 \quad +35 \\ \hline 9q^2 &= 49 \\ \frac{9q^2}{9} &= \frac{49}{9} \\ \sqrt{q^2} &= \sqrt{\frac{49}{9}} \\ q &= \boxed{\pm \frac{7}{3}} \end{aligned}$$

$$\begin{aligned} \textcircled{13} \quad 3z^2 - 18 &= -18 \\ +18 \quad +18 \\ \hline 3z^2 &= 0 \\ \frac{3z^2}{3} &= \frac{0}{3} \\ \sqrt{z^2} &= \sqrt{0} \\ z &= \boxed{0} \end{aligned}$$

$$\textcircled{16} \quad \frac{13}{-13} - 36x^2 = \frac{-12}{-13}$$

$$g = \pm \frac{1}{2}$$

$$\begin{aligned} \textcircled{15} \quad & \frac{61 - 3n^2 = -14}{-61 \quad -61} \\ & \frac{-3n^2 = -75}{-3 \quad -3} \\ & \sqrt{n^2} = \sqrt{25} \\ & n = \pm 5 \end{aligned}$$

(A)

$$\textcircled{16} \quad \frac{13 - 36x^2 = -12}{-13 \quad -13}$$

$$\frac{-36x^2 = -25}{-36 \quad -36}$$
$$x^2 = \sqrt{\frac{25}{36}}$$

$$\sqrt{x} = \frac{\sqrt{25}}{\sqrt{36}} = \pm \frac{5}{6}$$

(C)

$$\textcircled{29} \quad \frac{17 - \frac{1}{4}x^2 = 12}{-17 \quad -17}$$

$$\frac{-\frac{1}{4}x^2 = -5}{-\frac{1}{4} \quad -\frac{1}{4}}$$
$$\sqrt{x^2} = \sqrt{20}$$

(D)

$\sqrt{16} = 4$
 $\sqrt{25} = 5$
 $\sqrt{20}$ must be in between 4 & 5