1. Simplify the expression by using the quotient rule for square roots. $\sqrt{\frac{25}{49}}$

A. $\frac{5}{7}$

B. $\frac{7\sqrt{5}}{5}$

C. $\frac{\sqrt{5}}{7}$

D. $\frac{5\sqrt{7}}{7}$

E. $\frac{7}{5}$

F. $\frac{\sqrt{7}}{5}$

G. $\frac{5}{\sqrt{7}}$

H. $\frac{7}{\sqrt{5}}$

2. Solve the quadratic equation by using extraction of roots to obtain exact solutions. $q^2 - 2520 = 0$

A. $q = \pm 30\sqrt{11}$

B. $q = \pm 2\sqrt{6}$

C. $q = \pm 6\sqrt{15}$

D. $q = \pm\sqrt{10}$

E. $q = \pm\sqrt{70}$

F. $q = \pm 6\sqrt{70}$

G. $q = \pm 15\sqrt{33}$

H. $q = \pm\sqrt{3}$

3. Solve the quadratic equation by using extraction of roots to obtain exact solutions. $7a^2 - 1470 = 0$

A. $a = \pm 5\sqrt{7}$

B. $a = \pm 2\sqrt{30}$

C. $a = \pm 15\sqrt{11}$

D. $a = \pm 6\sqrt{6}$

E. $a = \pm 6\sqrt{3}$

F. $a = \pm\sqrt{210}$

G. $a = \pm\sqrt{10}$

H. $a = \pm 6\sqrt{55}$

4. Simplify the expression by rationalizing the denominator. $\frac{4}{\sqrt{15}}$

A. $\frac{4\sqrt{4}}{15}$

B. $\frac{15}{15\sqrt{4}}$

C. $\frac{15\sqrt{4}}{15}$

D. $\frac{15}{4\sqrt{15}}$

E. $\frac{4\sqrt{15}}{4}$

F. $\frac{15\sqrt{4}}{4}$

G. $\frac{15\sqrt{15}}{4}$

H. $\frac{4\sqrt{15}}{15}$

5. Simplify the expression using the product rule for square roots. $\sqrt{33}$

A. $3\sqrt{105}$

B. $2\sqrt{10}$

C. $\sqrt{33}$

D. $2\sqrt{3}$

E. $\sqrt{70}$

F. $30\sqrt{2}$

G. $3\sqrt{110}$

H. $30\sqrt{3}$

6. Solve the quadratic equation by using extraction of roots to obtain exact solutions. $2u^2 = 300$

A. $u = \pm 6\sqrt{7}$

B. $u = \pm\sqrt{165}$

C. $u = \pm 3\sqrt{30}$

D. $u = \pm 5\sqrt{6}$

E. $u = \pm 2\sqrt{10}$

F. $u = \pm 2\sqrt{154}$

G. $u = \pm 3\sqrt{5}$

H. $u = \pm 30\sqrt{3}$

7. Simplify the expression by rationalizing the denominator. $\frac{\sqrt{3}}{\sqrt{11}}$

A. $\frac{11}{3}$

B. $\frac{3\sqrt{3}}{11}$

C. $\frac{3\sqrt{11}}{11}$

D. $\frac{11}{3\sqrt{11}}$

E. $\frac{\sqrt{33}}{11}$

F. $\frac{3}{11\sqrt{3}}$

G. $\frac{\sqrt{33}}{3}$

H. $\frac{3}{11}$

8. Solve the quadratic equation by using extraction of roots to obtain exact solutions. $(3\xi - 5)^2 - 5940 = 0$

A. $\xi = \frac{5 \pm 2\sqrt{210}}{3}$

B. $\xi = \frac{-5 \pm 30\sqrt{6}}{3}$

C. $\xi = \frac{5 \pm 6\sqrt{165}}{3}$

D. $\xi = \frac{-5 \pm \sqrt{154}}{3}$

E. $\xi = \frac{-5 \pm 3\sqrt{5}}{3}$

F. $\xi = \frac{5 \pm 15\sqrt{2}}{3}$

G. $\xi = \frac{-5 \pm \sqrt{3}}{3}$

H. $\xi = \frac{5 \pm 2\sqrt{5}}{3}$