Question 1 of 20

Factor.

$$2x^2 - 7x + 5$$

Question 2 of 20

Find all complex solutions of $4x^2 + 5x + 2 = 0$.

Question 3 of 20

Solve $x^2 = 54$, where $x$ is a real number.
Simplify your answer as much as possible.

Question 4 of 20

Factor by grouping.

$$4v^3 + 3v^2 - 28v - 21$$

Question 5 of 20

Solve for $w$.

$$4w^2 - 20w = 0$$
Question 6 of 20

Factor.

$$64x^2 - 49$$

Question 7 of 20

Factor completely.

$$6y^6 - 20y^5 - 16y^4$$

Question 8 of 20

Simplify.

$$\sqrt{126}$$

Question 9 of 20

Solve.

$$(6 - z)(4z + 7) = 0$$

(If there is more than one solution, separate them with commas.)

Question 10 of 20

Factor.

$$x^2 - 16x + 64$$
Question 11 of 20

Simplify.

\[ \sqrt{28z} + \sqrt{63z} \]

Assume that the variable represents a positive real number.

Question 12 of 20

Factor completely.

\[ 3x^2 + 33x + 90 \]

Question 13 of 20

Factor.

\[ 3x^2 + 14xy + 15y^2 \]

Question 14 of 20

Solve for \( w \).

\[ 2w^2 + 15w + 47 = (w + 7)^2 \]

If there is more than one solution, separate them with commas.

Question 15 of 20

Factor completely.

\[ 8y^3 - 32x^2y \]
Question 16 of 20

Simplify.

\[ \sqrt{6} \cdot \sqrt{8} \]

Question 17 of 20

Factor completely.

\[ 45v - 20v^3 \]

Question 18 of 20

Factor by grouping.

\[ 2v - 5y^2 - 10y + yv \]

Question 19 of 20

Factor.

\[ 21z^2 - 32z + 12 \]

Question 20 of 20

Simplify.

\[ \sqrt{12} \]
Question 1 of 20

\((x - 1)(2x - 5)\)

Question 2 of 20

\(x = -\frac{5}{8} + \frac{\sqrt{7}}{8}i, -\frac{5}{8} - \frac{\sqrt{7}}{8}i\)

Question 3 of 20

\(x = 3\sqrt{6}, -3\sqrt{6}\)

Question 4 of 20

\((4v + 3)(v^2 - 7)\)

Question 5 of 20

\(w = 0, 5\)

Question 6 of 20

\((8x + 7)(8x - 7)\)

Question 7 of 20

\(2y^4(y - 4)(3y + 2)\)
Question 8 of 20

\[ 3\sqrt{14} \]

Question 9 of 20

\[ z = 6, -\frac{7}{4} \]

Question 10 of 20

\[ (x - 8)^2 \]

Question 11 of 20

\[ 5\sqrt{7}z \]

Question 12 of 20

\[ 3(x + 5)(x + 6) \]

Question 13 of 20

\[ (3x + 5y)(x + 3y) \]
Question 14 of 20

\[ w = -2, 1 \]

Question 15 of 20

\[ 8y(y + 2x)(y - 2x) \]

Question 16 of 20

\[ 4\sqrt{3} \]

Question 17 of 20

\[ 5v(3 + 2v)(3 - 2v) \]

Question 18 of 20

\[ (v - 5y)(2 + y) \]

Question 19 of 20

\[ (3z - 2)(7z - 6) \]

Question 20 of 20

\[ 2\sqrt{3} \]