

STATION 1

Solve using the quadratic formula:

a) $5x^2 + 10x - 35 = 0$

b) $x^2 + 3 = 7x$

STATION 2

Simplify the radical:

a) $\sqrt{45}$ b) $-3\sqrt{48}$

c) $10\sqrt{28}$ d) $\sqrt{120}$

e) $100\sqrt{200}$ f) $8\sqrt{96}$

STATION 3

Solve by extracting square roots:

a) $9 - 16x^2 = -621$

b) $5(x + 4)^2 - 7 = 3$

STATION 4

Solve by factoring:

a) $5x^2 = 16 - 2x$

b) $7x^2 + 40x - 12 = 0$

STATION 5

Use the discriminant $b^2 - 4ac$ to describe the number & type of solutions:

a) $-5x^2 + 9x - 1 = -3$

b) $6x^2 + 5x + 9 = 0$

c) $4x^2 - 4x + 1 = 0$

STATION 6

Solve. Use each method once.

a) $2x^2 - 12x - 13 = 0$

b) $15x^2 - 54x = -48$

c) $-2(2x - 1)^2 - 3 = -5$

STATION ANSWERS

QF ① $5x^2 + 10x - 35 = 0$ $x = \frac{-1 \pm \sqrt{2}}{2}$ $\leftarrow x = -1 \pm 2\sqrt{2}$
 $x^2 + 3 = 7x$ $x = \frac{7 \pm \sqrt{37}}{2}$

Simp ② a) $\sqrt{45} = 3\sqrt{5}$ b) $-3\sqrt{48} = -12\sqrt{3}$

J's c) $10\sqrt{28} = 20\sqrt{7}$ d) $\sqrt{20} = 2\sqrt{5}$

e) $100\sqrt{200} = 1000\sqrt{2}$ f) $8\sqrt{96} = 32\sqrt{6}$

J's ③ a) $9 - 16x^2 = -621$ BEST ANSWER OK FOR NOW
 $x = \pm \frac{3\sqrt{70}}{4}$ OR $x = \pm \frac{3\sqrt{5}}{2\sqrt{2}}$
 b) $5(x+4)^2 - 7 = 3$ $x = -4 \pm \sqrt{2}$

F ④ a) $5x^2 = 16 - 2x$ $x = \frac{8}{5}$, $x = -2$
 b) $7x^2 + 40x - 2 = 0$ $x = \frac{2}{7}$, $x = -6$

DISC ⑤ a) $-5x^2 + 9x - 1 = -3$ (121 2 real)
 b) $6x^2 + 5x + 9 = 0$ (-191 2 mag)
 c) $4x^2 - 4x + 1 = 0$ (0 1 real)

MIXED ⑥ a) $2x^2 - 12x - 13 = 0$ $x = \frac{6 \pm \sqrt{62}}{2}$ QF
 b) $15x^2 - 54x = -48$ $x = \frac{8}{5}$, $x = 2$ F
 c) $-2(2x-1)^2 - 3 = -5$ $\sqrt{5}$

$(2x-1)^2 = 1$ $2x-1 = \pm 1$ $x = \frac{1 \pm 1}{2} = \frac{0}{2} + 1$
 $2x = 1 \pm 1$