QEQFII L3 Solving Quadratic Eqns Using the Quadratic Formula again

Thursday, October 6, 2022 9:07 AM

QEQFII L3 Solving Quadratic Eqns Using the Quadratic For...

Lesson 3 The Quadratic Formula…again

Example 1
Solve, using the quadratic formula:

a) $(2x+1)(x-1)=5x$

$2x^2-2x+x-1-5x=0$

$2x^2-6x-1=0$

$a=2$, $b=-6$, $c=-1$

$$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$$

$$x=\frac{6\pm\sqrt{36-4(2)(-1)}}{2(2)}$$

$$x=\frac{6\pm\sqrt{44}}{4}$$

$$x=\frac{6\pm2\sqrt{11}}{4} \rightarrow x=\frac{3\pm\sqrt{11}}{2}$$

b) $\frac{1}{2}x^2-\frac{5}{4}x=3$ (multiply by 4)

$2x^2-5x-12=0$

$a=2$, $b=-5$, $c=-12$

$$x=\frac{5\pm\sqrt{25-4(2)(-12)}}{2(2)}$$

$$x=\frac{5\pm\sqrt{121}}{4}$$

$$x=\frac{5+11}{4} \qquad x=\frac{5-11}{4}$$

$$x=4 \qquad x=-\frac{3}{2}$$

* must be in the form $ax^2+bx+c=0$

c.) $2x^4 + 5x^2 - 12 = 0$

$$x^2 = \frac{-5 \pm \sqrt{5^2 - 4(2)(-12)}}{2(2)}$$

$$x^2 = \frac{-5 \pm 11}{4}$$

$$x^2 = \frac{-5 + 11}{4} \qquad x^2 = \frac{-5 - 11}{4}$$

$$x^2 = \frac{3}{2} \qquad x^2 = -4$$

rej

$\emptyset$

$$x = \pm\sqrt{\frac{3}{2}}$$

Assign

pg 281

#3e, h, i, j

4a, d, e, g

7b, c, d