What are the solutions to $3(x^2 + 4x + 2) = 0$

$3x^2 + 12x + 6 = 0$?

A) $x = 2 \pm \sqrt{2}$

B) $x = -2 \pm \frac{\sqrt{30}}{3}$

C) $x = -6 \pm \sqrt{2}$

D) $x = -6 \pm 6\sqrt{2}$

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

$$X = \frac{-4 \pm \sqrt{4^2 - 4(1)(2)}}{2(1)}$$

$$X = \frac{-4 \pm \sqrt{16 - 8}}{2}$$

$$X = \frac{-4 \pm \sqrt{8}}{2}$$

$$X = \frac{-4 \pm 2\sqrt{2}}{2} \qquad X = -2 \pm \sqrt{2}$$

$\sqrt{8}$

$\sqrt{4} \cdot \sqrt{2}$

$2\sqrt{2}$

$$x^2 - \frac{k}{2}x = 2p$$

In the quadratic equation above, $k$ and $p$ are constants. What are the solutions for $x$?

$$2\left(x^2 - \frac{k}{2}x - 2p = 0\right)$$

A) $x = \frac{k}{4} \pm \frac{\sqrt{k^2+2p}}{4}$

B) $x = \frac{k}{4} \pm \frac{\sqrt{k^2+32p}}{4}$

C) $x = \frac{k}{2} \pm \frac{\sqrt{k^2+2p}}{2}$

D) $x = \frac{k}{2} \pm \frac{\sqrt{k^2+32p}}{4}$

$$2x^2 - kx - 4p = 0$$

$$a = 2 \quad b = -k \quad c = -4p$$

$$x = \frac{k \pm \sqrt{(-k)^2 - 4(2)(-4p)}}{2(2)}$$

$$x = \frac{k \pm \sqrt{k^2 + 32p}}{4}$$