

$$\sqrt{3x^2 + 10x} - 5 = 0$$

$$\sqrt{3\left(\frac{5}{3}\right)^2 + 10\left(\frac{5}{3}\right)} - 5 \stackrel{?}{=} 0$$

$$\sqrt{3\left(\frac{25}{9}\right) + \frac{50}{3}} - 5 \stackrel{?}{=} 0$$

$$\sqrt{\frac{25}{3} + \frac{50}{3}} - 5 \stackrel{?}{=} 0$$

$$\sqrt{\frac{75}{3}} - 5 \stackrel{?}{=} 0$$

$$\sqrt{25} - 5 \stackrel{?}{=} 0$$

$$5 - 5 \stackrel{?}{=} 0$$

$$0 = 0$$