$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

Math League:the 7th week

The exact origin of the square root concept is unclear, but it is believed to have emerged from the practice of dividing land into equal square areas, where the length of a side represented the square root of the area. Both the Babylonians and Greeks are recognized for developing Heron's method, an early form of iterative approximation that was also used by Indian mathematicians around 800 BC. The Egyptians were employing an inverse proportion technique for calculating square roots as early as 1650 BC. Additionally, around 200 BC, Chinese texts indicate that square roots were approximated using methods involving excess and deficiency. In 1450 AD, Regiomontanus introduced a symbol for the square root, which was a stylized R. The familiar square root symbol $\sqrt{\ }$ was first used in print in 1525.

$$x = \sqrt{5 + \frac{\sqrt{99}}{2}} \times \sqrt{5 - \frac{\sqrt{99}}{2}}$$

$$x = ??$$

Solve for x: $\sqrt{x + \sqrt{x + 11}} + \sqrt{x - \sqrt{x + 11}} = 4$

$$V = \pi r^2 h$$

$$V = lw$$

The square root appearsin a lot of fieldsfor example:

In engineering and related fields such as architecture, carpentry, and construction, the square root plays a crucial role in designing efficient structures. One key application is distance approximation. When designing real-world structures, it's essential to accurately determine distances between points, whether it's between . poles, tiles, or corners. The square root is used to calculate these distances in 3D structures using a specific formula

HERE YOU HAVR ANOTHER THREE PROBLEMS BUT THE LEVEL HAS INCREASED!

$$x + y = 39$$

$$xy = 25$$

$$\sqrt{x} + \sqrt{y} = ??$$

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