

0.33
6.1

$$\begin{cases} x^2 + y^2 = 34 \\ x + y + xy = 23 \end{cases}$$

$$x^2 + y^2 = B^2 - 2A$$

$$\leftarrow \begin{cases} xy = A \\ x + y = B \end{cases} \quad (NO)$$

$$\begin{cases} B^2 - 2A = 34 \\ A + B = 23 \end{cases}$$

$$A = 23 - B$$

$$B^2 - 2(23 - B) = 34$$

$$B^2 + 2B - 80 = 0$$

$$B = -10 \rightarrow A = 33$$

$$B = 8 \rightarrow A = 15$$

\rightarrow

$$\begin{cases} xy = 33 \\ x + y = -10 \end{cases}$$

$$x = \frac{33}{y}$$

$$\frac{33}{y} + y = -10$$

$$y^2 + 10y + 33 = 0$$

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$$\downarrow$$
$$\begin{cases} xy = 15 \\ x + y = 8 \end{cases}$$

$$x = \frac{15}{y}$$

$$\frac{15}{y} + y = 8$$

$$y^2 - 8y + 15 = 0$$

$$\boxed{y = 5 \rightarrow x = 3}$$

$$\boxed{x = 3 \rightarrow y = 5}$$