

$$7 \quad 63^2 + x^2 = 65^2$$

$$\begin{array}{r} 3969 + x^2 = 4225 \\ -3969 \quad -3969 \end{array}$$

$$x^2 = 256$$

$$x = \sqrt{256}$$

$$x = 16 \quad \checkmark$$

$$9. \quad 84^2 + x^2 = 85^2$$

$$\begin{array}{r} 7056 + x^2 = 7225 \\ -7056 \quad -7056 \end{array}$$

$$x^2 = 169$$

$$x = \sqrt{169}$$

$$x = 13 \quad \checkmark$$

$$1. \quad 3^2 + 4^2 = x^2$$

$$9 + 16 = x^2$$

$$25 = x^2$$

$$x = \sqrt{25}$$

$$x = 5$$

$$5^2 + 12^2 = x^2$$

$$25 + 144 = x^2$$

$$169 = x^2$$

$$x = \sqrt{169}$$

$$\boxed{x = 13} \quad \checkmark$$

$$3. \quad 25^2 + x^2 = 65^2$$

$$\begin{array}{r} 625 + x^2 = 4225 \\ -625 \quad -625 \end{array}$$

$$x^2 = 3600$$

$$x = \sqrt{3600}$$

$$x = 60$$

$$11^2 + 60^2 = x^2$$

$$121 + 3600 = x^2$$

$$3721 = x^2$$

$$x = \sqrt{3721}$$

$$\boxed{x = 61} \quad \checkmark$$

algebra - everywhere

$$5. \quad 21^2 + x^2 = 29^2 \quad \text{Pythagoras}$$

$$\begin{array}{r} 441 + x^2 = 841 \\ -441 \quad -441 \end{array}$$

$$x^2 = 400$$

$$x = \sqrt{400}$$

$$x = 20$$

$$12^2 + x^2 = 20^2$$

$$\begin{array}{r} 144 + x^2 = 400 \\ -144 \quad -144 \end{array}$$

$$x^2 = 256$$

$$x = \sqrt{256}$$

$$\boxed{x = 16} \quad \checkmark$$

$$7. \quad 8^2 + x^2 = 17^2$$

$$\begin{array}{r} 64 + x^2 = 289 \\ -64 \quad -64 \end{array}$$

$$x^2 = 225$$

$$x = \sqrt{225}$$

$$x = 15$$

yr 10 students work

$$15^2 + 36^2 = x^2$$

$$225 + 1296 = x^2$$

$$1521 = x^2$$

$$x = \sqrt{1521}$$

$$\boxed{x = 39} \quad \checkmark$$

$$9. \quad 10^2 + x^2 = 26^2$$

$$\begin{array}{r} 100 + x^2 = 676 \\ -100 \quad -100 \end{array}$$

$$x^2 = 576$$

$$x = \sqrt{576}$$

$$x = 24$$

$$24^2 + 18^2 = x^2$$

$$576 + 324 = x^2$$

$$900 = x^2$$

$$x = \sqrt{900}$$

$$\boxed{x = 30} \quad \checkmark$$