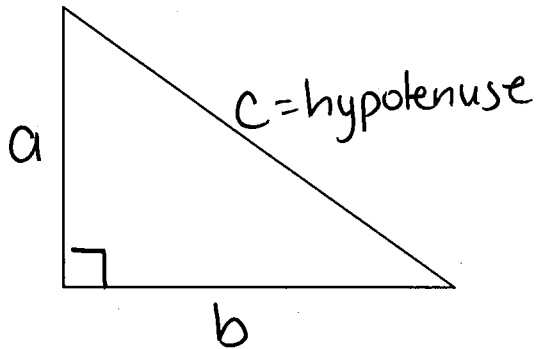


1.1 Pythagorean Theorem Review

$$a^2 + b^2 = c^2$$



- Sides "a" and "b" form the right angle
- Side "c" is opposite the right angle and is the longest

Example: Find the length of each indicated side to the nearest tenth.

a)

$$a^2 + b^2 = c^2$$

$$12^2 + 9^2 = c^2$$

$$144 + 81 = c^2$$

$$225 = c^2$$

$$\sqrt{225} = c$$

$$c = 15$$

b)

$$a^2 + b^2 = c^2$$

$$x^2 + 6^2 = 10^2$$

$$x^2 + 36 = 100$$

$$x^2 = 64$$

$$x = \sqrt{64}$$

$$x = 8$$

1. Find the length of each indicated side to the nearest tenth.

a)

$$a^2 + b^2 = c^2$$

$$7^2 + 3^2 = c^2$$

$$49 + 9 = c^2$$

$$58 = c^2$$

$$c = \sqrt{58}$$

$$x = 7.6$$

b)

$$a^2 + b^2 = c^2$$

$$10^2 + 24^2 = c^2$$

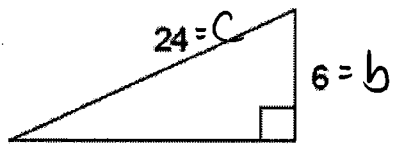
$$100 + 576 = c^2$$

$$676 = c^2$$

$$c = \sqrt{676}$$

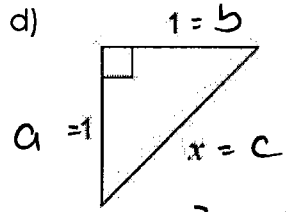
$$c = 26$$

c)



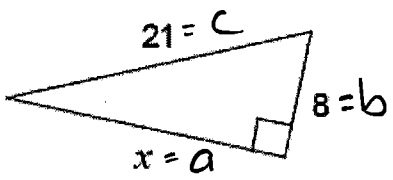
$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 x^2 + 6^2 &= 24^2 \\
 x^2 + 36 &= 576 \\
 x^2 &= 540 \\
 x &= \sqrt{540} \\
 x &= 23.2
 \end{aligned}$$

d)



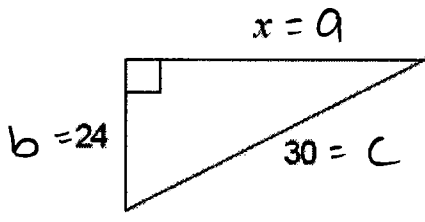
$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 1^2 + 1^2 &= x^2 \\
 1 + 1 &= x^2 \\
 2 &= x^2 \\
 x &= \sqrt{2} \\
 x &= 1.4
 \end{aligned}$$

e)



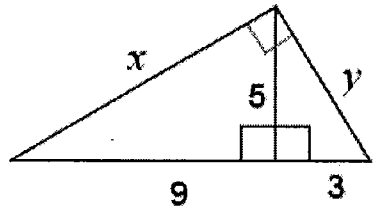
$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 x^2 + 8^2 &= 21^2 \\
 x^2 + 64 &= 441 \\
 x^2 &= 377 \\
 x &= \sqrt{377} \\
 x &= 19.4
 \end{aligned}$$

f)

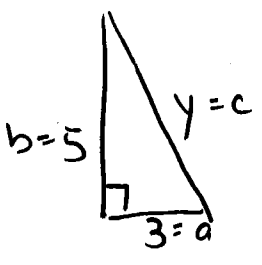


$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 x^2 + 24^2 &= 30^2 \\
 x^2 + 576 &= 900 \\
 x^2 &= 324 \\
 x &= \sqrt{324} \\
 x &= 18
 \end{aligned}$$

g)

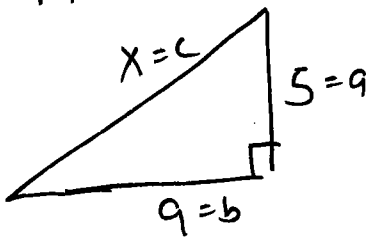


Find y



$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 3^2 + 5^2 &= y^2 \\
 9 + 25 &= y^2 \\
 34 &= y^2 \\
 y &= \sqrt{34} \\
 y &= 5.8
 \end{aligned}$$

Find x



$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 5^2 + 9^2 &= x^2 \\
 25 + 81 &= x^2 \\
 106 &= x^2 \\
 x &= \sqrt{106} \\
 x &= 10.3
 \end{aligned}$$