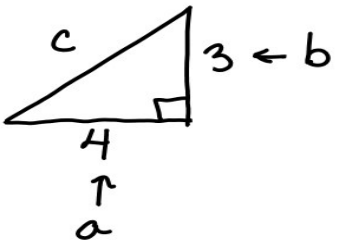
Examples,

Find the length of the missing legs



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

$4^2 + 3^2 = c^2$

$16 + 9 = c^2$

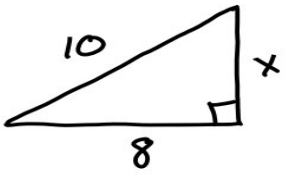
$25 = c^2$

Find c by taking square root of both sides

$c^2 = 25$

$\sqrt{c^2} = \sqrt{25}$

$c = 5$ ← answer



$c = 10$
$a = 8$
$b = x$

plug-in

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

$8^2 + x^2 = 10^2$

$64 + x^2 = 100$

$-64 \qquad -64$ ← get x^2 isolated

$x^2 = 36$

$\sqrt{x^2} = \sqrt{36}$

$x = 6$ ← answer