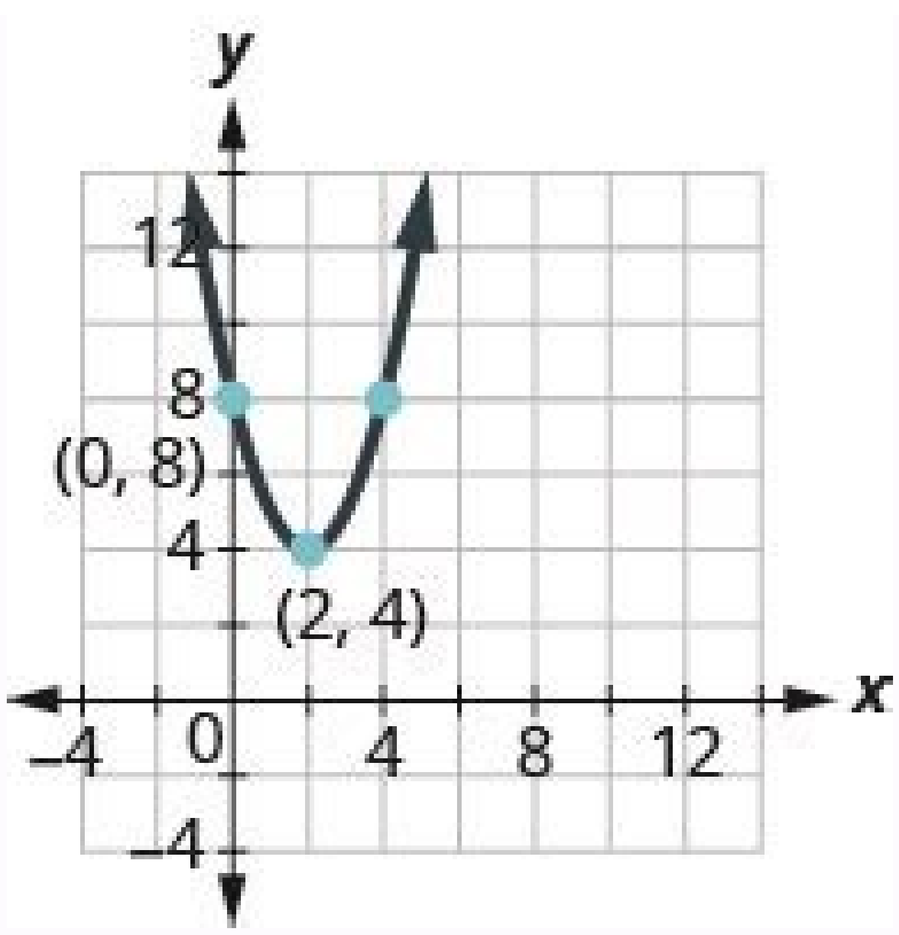
Find the solution of each of the following quadratic equation by completing the square



Let base of the right triangle $(b) = x$

Therefore, altitude $(p) = x - 7$

Given, hypotenuse $(h) = 13cm$

Now, we know that, $h^2 = p^2 + b^2$

Therefore, $13^2 = (x-7)^2 + x^2$

$\Rightarrow 169 = x^2 + 49 - 14x + x^2$

$\Rightarrow 169 = 2x^2 - 14x + 49$

$\Rightarrow 2x^2 - 14x + 49 - 169 = 0$

$\Rightarrow 2x^2 - 14x - 120 = 0$

$\Rightarrow 2(x^2 - 7x - 60) = 0$

$\Rightarrow x^2 - 7x - 60 = 0$

$\Rightarrow x^2 - 12x + 5x - 60 = 0$

$\Rightarrow x(x-12) + 5(x-12) = 0$

$\Rightarrow (x+5)(x-12) = 0$

$$\left(x + \frac{b}{2 \cdot a}\right)^2 = \frac{b^2}{4 \cdot a^2} - \frac{c}{a}$$

$$ay^2 + by = -c$$

$$y^2 + 2y = 4$$

$$a = 1 \qquad x = \frac{-6 \pm [6^2 - 4(1)(-7)]^{\frac{1}{2}}}{2(1)}$$

$$b = 6 \qquad x = \frac{-6 \pm [36 + 28]^{\frac{1}{2}}}{2}$$

$$c = -7 \qquad x = \frac{-6 \pm [64]^{\frac{1}{2}}}{2}$$

$$\text{Which reduces to} \quad x = \frac{-6 \pm 8}{2}$$

$$\text{And yields} \quad x = -7, 1$$

Find the solution of each of the following quadratic equation by completing the square brainly. Find the solution of each of the following quadratic equation by completing the square s2+4s-21=0. Find the solution of each of the following quadratic equation by completing the square x2-2x=3. Find the solution of each of the following quadratic equation by completing the square 4x2-32x=-28. Find the solution of each of the following quadratic equation by completing the square t2+10t+9=0. Find the solution of each of the following quadratic equation by completing the square x2+14x=32. Find the solution of each of the following quadratic equation by completing the square r2-10r=-17.

Answer: x1 = -7 , x2 = 3 Step by step: Complete the square Answer: 3 and -7 Step by step: Take the coefficient of the second term