

Oct 23, 2012

Warm-up

Nov. 8, 2017

Find the roots of each using the quadratic formula:

a) $y = 2x^2 + 17x + 30$ $(-5/2, -6)$ b) $y = x^2 - 8x + 16$ $(4, 4)$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-(-8) \pm \sqrt{(-8)^2 - 4(1)(16)}}{2(1)}$$

$$\frac{8 \pm \sqrt{64 - 64}}{2}$$

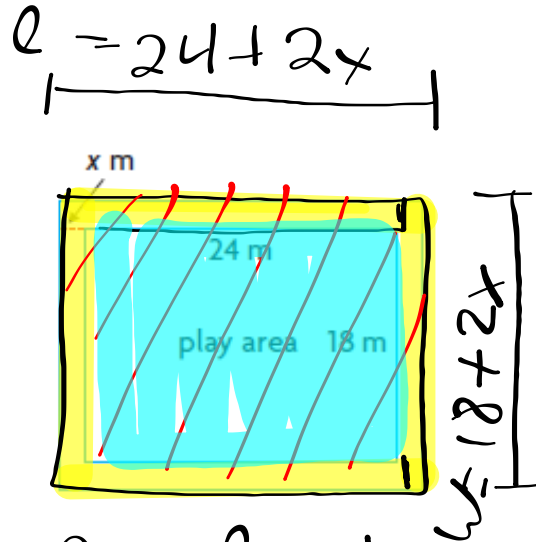
$$\frac{8 \pm \sqrt{0}}{2} \quad \frac{8+0}{2}, \frac{8-0}{2}$$

$$x = 4$$

LEARN ABOUT the Math

Ian has been hired to lay a path of uniform width around a rectangular play area, using crushed rock. He has enough crushed rock to cover 145 m².

? If Ian uses all the crushed rock, how wide will the path be?



F
O
I
L

$$A = (24 + 2x)(18 + 2x) \quad A = l \times w$$

$$A = 4x^2 + 84x + 432$$

$$145 = 4x^2 + 84x + 432 \quad \rightarrow \quad \cancel{432} \quad \cancel{-432}$$

$$0 = 4x^2 + 84x - 145$$

$\underset{a}{4} \quad \underset{b}{84} \quad \underset{c}{-145}$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = 1.6$$