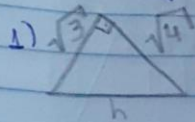


TRIÂNGULO RETÂNGULO

Exercícios básicos

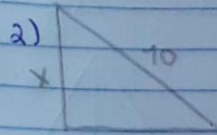


$$h^2 = 3^2 + 4^2$$

$$h^2 = 9 + 16$$

$$h^2 = 25$$

$$h = 5$$



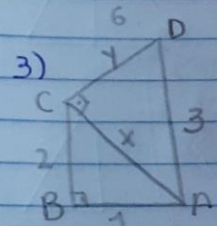
$$10^2 = x^2 + 6^2$$

$$100 = x^2 + 36$$

$$100 - 36 = x^2$$

$$64 = x^2$$

$$x = 8$$



CD?

$$2^2 + 1^2 = x^2$$

$$4 + 1 = x^2$$

$$5 = x^2$$

$$x = \sqrt{5}$$

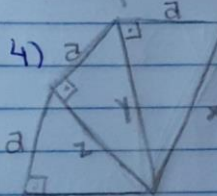
$$3^2 = x^2 + y^2$$

$$9 = 5 + y^2$$

$$4 = y^2$$

$$y = 2$$

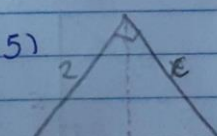
CD = 2



$$x^2 = a^2 + a^2$$

$$x^2 = 2a^2$$

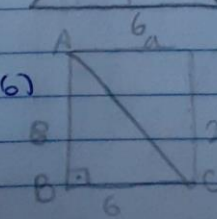
$$x = a\sqrt{2}$$



$$x^2 = 2^2 + 2^2$$

$$x^2 = 8$$

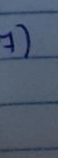
$$x = 2\sqrt{2}$$



$$10^2 = 8^2 + 6^2$$

$$100 = 64 + 36$$

$$100 = 100$$



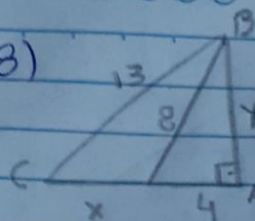
$$d^2 = 100^2 + 160^2$$

$$d^2 = 10000 + 25600$$

$$d^2 = 35600$$

$$d = \sqrt{35600} = 188.68$$

8)



$$8^2 = 4^2 + x^2$$

$$x^2 = 64 - 16$$

$$x^2 = 48$$

$$x = 4\sqrt{3}$$

$$13^2 = (4+x)^2 + (4\sqrt{3})^2$$

$$169 = x^2 + 8x + 16 + 16 \cdot 3$$

$$169 = x^2 + 8x + 16 + 48$$

$$x^2 + 8x + 64 = 169$$

$$x^2 + 8x - 105 = 0$$

$$\Delta = 64 - 4 \cdot 1 \cdot (-105)$$

$$\Delta = 64 + 420$$

$$\Delta = 484$$

$$x = 8 \pm \sqrt{484/21}$$

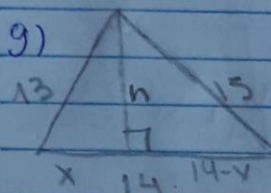
$$x = 8 + 22/2$$

$$x = -8 - 22/2 = x = -15$$

$$x = -8 + 22/2 = x = 7$$

7

9)



$$15^2 = h^2 + (14-x)^2$$

$$h^2 = 225 - 196 - 28x - x^2$$

$$13^2 = h^2 + x^2$$

$$h^2 = 169 - x^2$$

$$169 - x^2 = 29 - 28x - x^2$$

$$x = 140/28 = 5$$

$$h^2 = 169 - 5^2$$

$$h^2 = 144$$

$$h = 12$$

$$10) x^2 = (r+r')^2 - (r-r')^2$$

$$x^2 = (r^2 + 2rr' + r'^2) - (r^2 - 2rr' + r'^2)$$

$$x^2 = 4rr' \rightarrow x = 2\sqrt{rr'}$$

$$11) AC^2 = 40^2 + 30^2$$

$$AC^2 = 1600 + 900$$

$$AC^2 = 2500$$

$$AC = 50$$

8

$$c^2 = a \cdot n$$

$$20^2 = 50n$$

$$400 = 50n$$

$$n = 8$$