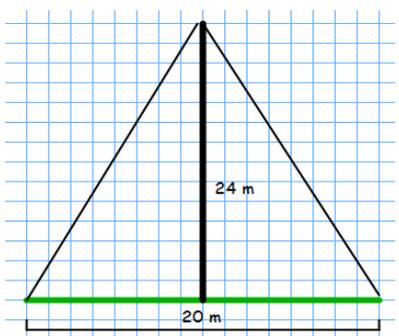


1. $\sqrt{20} + \sqrt{45} + \sqrt{5^5} - \frac{20}{\sqrt{5}} =$ 2. $\sqrt{37} + \frac{2\sqrt{15}}{\sqrt{5}} + \frac{12}{\sqrt{3}} - \sqrt{75} =$

2. $\sqrt{\left\{ \left[\left(\frac{3}{5} + \frac{1}{2} \right) \times \frac{2}{7} : \frac{1}{5} \right]^2 - \left[1 + \frac{10}{49} - \left(\frac{6}{7} \right)^2 \right] \right\} \times 8 =$

3. $\sqrt{\left(\frac{7}{9} - \frac{5}{27} \right) - \left[\frac{5}{9} - \left(\frac{2}{3} - \frac{16}{27} \right) \right]} + \sqrt{\left[\left(\frac{5}{2} + \frac{3}{4} \right) \times \frac{2}{39} + \frac{1}{3} \right] \times 18}$

4. In un trapezio isoscele l'altezza misura di cm 15, la base maggiore misura cm 26 ed è $\frac{13}{5}$ della base minore.
Trova perimetro e area sapendo che il lato obliquo misura cm 17.
+ Trova il perimetro di un quadrato equivalente.
5. In un trapezio rettangolo la somma delle basi è di cm 25 e la base maggiore è $\frac{3}{2}$ della base minore. L'altezza è $\frac{6}{5}$ della base minore e il lato obliquo misura 13 cm.
6. Trova perimetro e area.
7. Un palo ha due tiranti di ferro per sorreggerlo, l'altezza del palo è 24 m e la distanza tra l'ancoraggio dei tiranti a terra è 20 m. Qual è la lunghezza complessiva dei due tiranti?

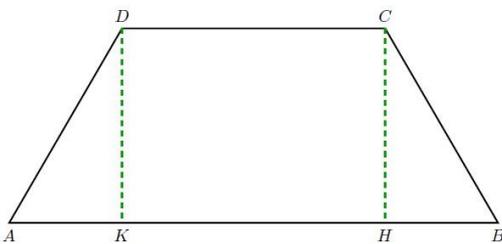


$$\begin{aligned}
& \sqrt{\left\{ \left[\left(\frac{3}{5} + \frac{1}{2} \right) \times \frac{2}{7} \times \frac{1}{5} \right]^2 - \left[1 + \frac{10}{49} - \left(\frac{6}{7} \right)^2 \right] \right\} \times 8} = \\
& = \sqrt{\left\{ \left[\frac{6+5}{10} \times \frac{2}{7} \times 5 \right]^2 - \left[1 + \frac{10}{49} - \frac{36}{49} \right] \right\} \times 8} = \\
& = \sqrt{\left\{ \left[\frac{11}{2} \times \frac{2}{7} \times 5 \right]^2 - \frac{49+10-36}{49} \right\} \times 8} = \\
& = \sqrt{\left\{ \left[\frac{11}{7} \right]^2 - \frac{23}{49} \right\} \times 8} = \\
& = \sqrt{\left\{ \frac{121}{49} - \frac{23}{49} \right\} \times 8} = \sqrt{\frac{98}{49} \times 8} = \sqrt{16} = 4
\end{aligned}$$

$$\begin{aligned}
& \sqrt{\left(\frac{7}{9} - \frac{5}{27} \right) - \left[\frac{5}{9} - \left(\frac{2}{3} - \frac{16}{27} \right) \right]} + \sqrt{\left[\left(\frac{5}{2} + \frac{3}{4} \right) \times \frac{2}{39} + \frac{1}{3} \right] \times 18} \\
& = \sqrt{\frac{21-5}{27} - \left[\frac{5}{9} - \frac{18-16}{27} \right]} + \sqrt{\left[\frac{10+3}{4} \times \frac{2}{39} + \frac{1}{3} \right] \times 18} = \\
& = \sqrt{\frac{16}{27} - \frac{15-2}{27}} + \sqrt{\left[\frac{13}{4} \times \frac{2}{39} + \frac{1}{3} \right] \times 18} = \\
& = \sqrt{\frac{16-13}{27}} + \sqrt{\left[\frac{1}{6} + \frac{1}{3} \right] \times 18} = \\
& = \sqrt{\frac{3}{27}} + \sqrt{\frac{1+2}{6} \times 18} = \frac{1}{3} + \sqrt{\frac{3}{6} \times 18} = \\
& = \frac{1}{3} + \sqrt{9} = \frac{1}{3} + 3 = \frac{10}{3}
\end{aligned}$$

$$\begin{aligned} & \sqrt{20} + \sqrt{45} + \sqrt{5^5} - \frac{20}{\sqrt{5}} = \\ & = \sqrt{4 \cdot 5} + \sqrt{9 \cdot 5} + 5^2 \sqrt{5} - \frac{4 \cdot 20 \sqrt{5}}{5} = \\ & = 2\sqrt{5} + 3\sqrt{5} + 25\sqrt{5} - 4\sqrt{5} = \\ & = 26\sqrt{5} \end{aligned}$$

$$\begin{aligned} & \sqrt{3^7} + \frac{2\sqrt{15}}{\sqrt{5}} + \frac{12}{\sqrt{3}} - \sqrt{75} = \\ & = 3^3 \sqrt{3} + 2\sqrt{3} + \frac{4 \cdot 2\sqrt{3}}{3} - \sqrt{25 \cdot 3} = \\ & = 27\sqrt{3} + 2\sqrt{3} + 4\sqrt{3} - 5\sqrt{3} = \\ & = 28\sqrt{3} \end{aligned}$$



$$\begin{aligned} h &= 15 \text{ cm} \\ B &= 26 \text{ cm} \\ B &= \frac{13}{5} b \\ l &= 17 \text{ cm} \\ A_{TR} &= A_e = ? \\ P_{TR} &= ? \quad P_R = ? \end{aligned}$$

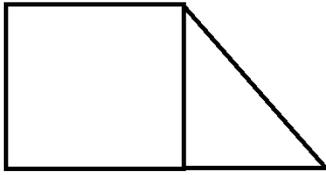
$$b = (B : 13) \times 5 = \left(\frac{26 : 13}{2} \right) \times 5 = 10 \text{ cm}$$

$$A = \frac{(B+b) \times h}{2} = \frac{(26+10) \times 15}{2} = \frac{540}{2} = 270 \text{ cm}^2$$

$$P_{TR} = B + b + 2l = 26 + 10 + 2 \cdot 17 = 70 \text{ cm}$$

$$l_e = \sqrt{A} = \sqrt{270} \cong 16,5 \text{ cm}$$

$$P_R = 4l = 4 \times 16,5 = 66 \text{ cm}$$



$$B + b = 25 \text{ cm}$$

$$B = \frac{3}{2} b$$

$$h = \frac{6}{5} b$$

$$l = 13 \text{ cm}$$

$$P = ? \quad A = ?$$

$$\frac{3}{2} + \frac{2}{2} = \frac{5}{2} = 25 \text{ cm}$$

$$25 : 5 = 5 \text{ cm U.F.}$$

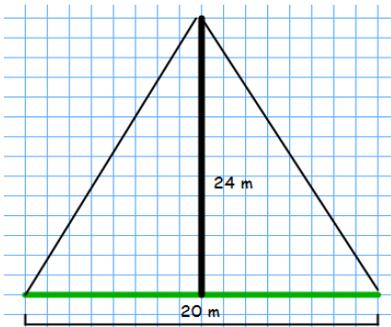
$$B = 5 \cdot 3 = 15 \text{ cm}$$

$$b = 5 \cdot 2 = 10 \text{ cm}$$

$$h = \frac{6}{5} b = \frac{6}{5} \cdot 10 = 12 \text{ cm}$$

$$A = \frac{(B+b) \cdot h}{2} = \frac{(15+10) \cdot 12}{2} = 150 \text{ cm}^2$$

$$P = B + b + h + l = 15 + 10 + 12 + 13 = 50 \text{ cm}$$



$$C = 20 : 2 = 10 \text{ cm}$$

$$i = \sqrt{C^2 + C^2} = \sqrt{24^2 + 10^2} = 26 \text{ cm TIRANTE}$$

$\begin{matrix} 2 \cdot 12 & 2 \cdot 5 & 2 \cdot 13 \end{matrix}$

$$2 \text{ TIRANTI} = 26 \times 2 = 52 \text{ m}$$