1 In un triangolo isoscele la base misura cm 20 e l'altezza cm 24

a. trova area e perimetro del triangolo
b. trova l'area dell'esagono regolare isoperimetrico al triangolo (N 0,866 – N' 2,6)

2 Due rombi sono simili, le diagonali del primo misurano rispettivamente cm 24 e cm 32 e la diagonale maggiore del secondo misura cm 48, trova l'area e il perimetro del secondo rombo

3 $\sqrt{\left(\frac{1}{4}+\frac{2}{3}-\frac{5}{6}\right):\frac{5}{4}\cdot\frac{3}{5}}+\sqrt{\left(\frac{3}{5}+\frac{7}{10}-\frac{1}{4}\right)\cdot\frac{8}{15}:\frac{7}{2}}$

4 $\sqrt{\left(\frac{5}{8}\times\frac{14}{15}+\frac{12}{11}\times\frac{11}{8}\right)\times\left(\frac{6}{5}-\frac{3}{4}\right)\times\frac{1}{15}}$

5 $\left[\left(\frac{3}{4}+\frac{2}{3}\right)+\left(\frac{4}{12}\cdot\frac{7}{4}\right)\right]:x=\left(\frac{3}{4}-\frac{9}{16}\cdot\frac{10}{15}-\frac{2}{10}\right):\frac{7}{4}$

$$= \sqrt{\frac{3+8-10}{12} \cdot \frac{4}{5} \cdot \frac{3}{5}} + \sqrt{\frac{12+14-5}{20} \cdot \frac{8}{15} \cdot \frac{2}{7}} =$$

$$= \sqrt{\frac{1}{12} \cdot \frac{4}{5} \cdot \frac{3}{5}} + \sqrt{\frac{21}{20} \cdot \frac{8}{15} \cdot \frac{2}{7}} = \sqrt{\frac{1}{25}} + \sqrt{\frac{4}{25}} = \frac{1}{5} + \frac{2}{5} = \frac{3}{5}$$

$$= \sqrt{\left(\frac{15}{8} \cdot \frac{14}{15} + \frac{12}{11} \cdot \frac{11}{8}\right) \cdot \frac{24-15}{20} \cdot \frac{1}{15}} =$$

$$= \sqrt{\left(\frac{7}{12} + \frac{3}{2}\right) \cdot \frac{9}{20} \cdot \frac{1}{15}} = \sqrt{\frac{7+18}{12} \cdot \frac{9}{20} \cdot \frac{1}{15}} = \sqrt{\frac{25}{12} \cdot \frac{9}{20} \cdot \frac{1}{15}} = \sqrt{\frac{1}{16}} = \frac{1}{4}$$

$$\left[\frac{9+8}{12} + \frac{4}{12} \cdot \frac{7}{4}\right] : x = \left(\frac{3}{4} - \frac{8}{16} \cdot \frac{10}{15} - \frac{1}{5}\right) : \frac{7}{4}$$

$$\left[\frac{17}{12} + \frac{7}{12}\right] : x = \left(\frac{3}{4} - \frac{3}{8} - \frac{1}{5}\right) : \frac{7}{4}$$

$$\frac{24}{12} : x = \frac{30-15-8}{40} : \frac{7}{4} \qquad 2 : x = \frac{7}{40} : \frac{7}{4}$$

$$x = 2 \cdot \frac{7}{4} \cdot \frac{40}{7} = 20$$

$b = 20\ cm$
$h = 24\ cm$
$A = ?\quad 2p = ?$

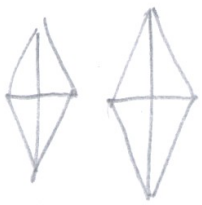
a) $l = \sqrt{h^2 + \left(\frac{b}{2}\right)^2} = \sqrt{24^2 - 10^2} = 26\ cm$
$12 \cdot 2 \quad 5 \cdot 2 \quad 13 \cdot 2$

$A = \frac{b \cdot h}{2} = \frac{20 \cdot 24}{2} = 240\ cm^2$

$2p = 2l + b = 2 \cdot 26 + 20 = 72\ cm$

b) $l = 2p : 6 = 72 : 6 = 12\ cm$

$A = l^2 \cdot N' = 144 \cdot 2{,}6 = 374{,}40\ cm^2$



$d' = 24\ cm$
$D' = 32\ cm$
$D'' = 48\ cm$
$A'' = ?\quad 2p'' = ?$

$d' : d'' = D' : D''$

$24 : x = 32 : 48$

$x = \frac{24 \cdot 48}{32} = 36\ cm$

$A'' = \frac{D'' \cdot d''}{2} = \frac{48 \cdot 36}{2} = 864\ cm^2$

$l'' = \sqrt{\left(\frac{D''}{2}\right)^2 + \left(\frac{d''}{2}\right)^2} = \sqrt{24^2 + 18^2} = 30\ cm$
$6 \cdot 4 \quad 6 \cdot 3 \quad 6 \cdot 5$

$2p'' = 4l'' = 4 \cdot 30 = 120\ cm$