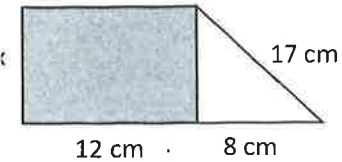
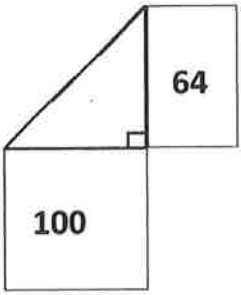
›raba Pitagorovega izreka

'ačunaj obseg in ploščino osenčenega dela na sliki:





računaj neznano stranico pravokotnega
›tnika.

ıa kateta meri 9 cm (15m), druga kateta meri 40cm (20m). Koliko meri
tenuza?

pravokotnem trikotniku izračunaj eno izmed katet, če imaš podano eno
to in hipotenuzo:

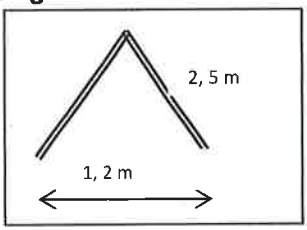
=36 cm in c= 39 cm; b) a=1,2cm in c= 3,7 cm

ana je stranica kvadrata a= 4 cm. Izračunaj njegovo diagonalo in ploščino.

vadrat ima diagonalo dolgo $3\sqrt{2}$cm. Kolikšna sta stranica in obseg kvadrata?

ana je ploščina kvadrata p = 64 cm2 . Izračunaj diagonalo kvadrata.

b zid prislonimo 8 m dolgo lestev. Na tleh je
idu oddaljena 1,5 m. a) Kako visoko po zidu
lestev?



ako visoko seže dvokraka lestev, če smo jo
avili tako, kot kaže slika?

računaj stranico a in obseg enakokrakega
›tnika s $c = 12$ cm in $v_c = 9{,}1$ cm.

Izračunaj diagonalo pravokotnika, če merita stranici 12 cm in 16 cm.

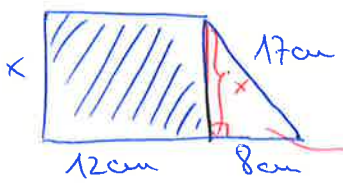
Romb s stranico 1,3 dm ima diagonalo e = 1 dm. Izračunaj dolžino druge
onale in ploščino romba.

V rombu s podatki: a) e = 15cm, f = 12cm izračunaj obseg;
= 40 dm, e = 10 dm izračunaj ploščino.

V deltoidu merita sosednji stranici 30 in 26 m. Diagonala, ki je pravokotna na
ernostno os pa meri 41 m. Koliko meri druga diagonala in kolikšna je
čina deltoida.

Uporaba str. 1.

1.



$o = 2 \cdot a + 2 \cdot b$

$o = x + 12 + x + 12$

$o = 2 \cdot 15 + 2 \cdot 12$

$\boxed{o = 54\,cm}$

$x^2 = 17^2 - 8^2$

$x^2 = 289 - 64$

$\sqrt{x^2} = \sqrt{225} \quad /\sqrt{}$

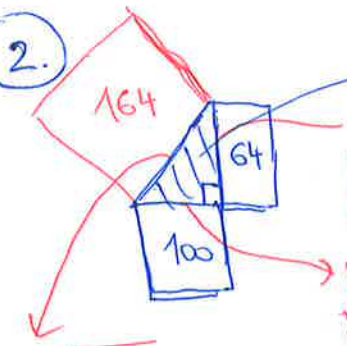
$\boxed{x = 15\,cm}$

$p = a \cdot b$

$p = 12 \cdot 15$

$\boxed{p = 180\,cm^2}$

2.



$k_1 = \sqrt{64}$

$\boxed{k_1 = 8\,cm}$

$k_2 = \sqrt{100}$

$\boxed{k_2 = 10\,cm}$

$p_h = \sqrt{164}$

$p_h = \sqrt{4 \cdot 41}$

$\boxed{p_h = 2\sqrt{41}\,cm}$

$o = 2\sqrt{41} + 8 + 10$

$\boxed{o = (18 + 2\sqrt{41})\,cm}$

$p = \frac{k_1 \cdot k_2}{2}$

$p = \frac{8 \cdot 10}{2}$

$\boxed{p = 40\,cm^2}$

3.

a) $k_1 = 9\,cm$

$k_2 = 40\,cm$

$p_h = ?$

$p_h^2 = k_1^2 + k_2^2$

$p_h^2 = 9^2 + 40^2$

$p_h^2 = 81 + 1600$

$\sqrt{p_h^2} = \sqrt{1681} \quad /\sqrt{}$

$\boxed{p_h = 41\,cm}$

b) $k_1 = 15\,cm$

$k_2 = 20\,cm$

$p_h = ?$

$p_h^2 = k_1^2 + k_2^2$

$p_h^2 = 15^2 + 20^2$

$p_h^2 = 225 + 400$

$\sqrt{p_h^2} = \sqrt{625} \quad /\sqrt{}$

$\boxed{p_h = 25\,cm}$

4.

a) $b = 36\,cm = k_1$

$c = 39\,cm = p_h$

$k_2 = ?$

$k_2^2 = p_h^2 - k_1^2$

$k_2^2 = 39^2 - 36^2$

$k_2^2 = 1521 - 1296$

$\sqrt{k_2^2} = \sqrt{225} \quad /\sqrt{}$

$\boxed{k_2 = 15\,cm}$

b) $a = 1{,}2\,cm = k_1$

$c = 3{,}7\,cm = p_h$

$k_2 = ?$

$k_2^2 = p_h^2 - k_1^2$

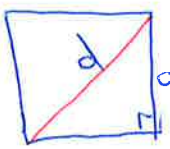
$k_2^2 = 3{,}7^2 - 1{,}2^2$

$k_2^2 = 13{,}69 - 1{,}44$

$\sqrt{k_2^2} = \sqrt{12{,}25} \quad /\sqrt{}$

$\boxed{k_2 = 3{,}5\,cm}$

5.



$a = 4\,cm$

$d = ?$

$p = ?$

$d^2 = a^2 + a^2$

$d^2 = 4^2 + 4^2$

$d^2 = 16 + 16$

$\sqrt{d^2} = \sqrt{32} \quad /\sqrt{}$

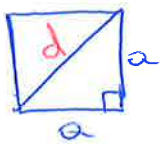
$d = \sqrt{16 \cdot 2}$

$\boxed{d = 4\sqrt{2}\,cm}$

$p = a \cdot a$

$p = 4 \cdot 4$

$\boxed{p = 16\,cm^2}$



$d = 3\sqrt{2}\,cm$

$a = ?$

$\sigma = ?$

$d^2 = 2a^2$

$a^2 = \frac{d^2}{2}$

$a^2 = \frac{(3\sqrt{2})^2}{2}$

$(3\sqrt{2})^2 = 3^2 \cdot (\sqrt{2})^2 = 9 \cdot 2 = 18$

$a^2 = \frac{18}{2}$

$\sqrt{a^2} = \sqrt{9}$ /√

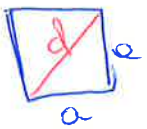
$a = 3\,cm$

$\sigma = 4 \cdot a$

$\sigma = 4 \cdot 3$

$\sigma = 12\,cm$

7.



$p = 64\,cm^2 \rightarrow p = a^2$

$a^2 = p$ /√

$a = \sqrt{p} = \sqrt{64}$

$a = 8\,cm$

$d^2 = a^2 + a^2$

$d^2 = 8^2 + 8^2$

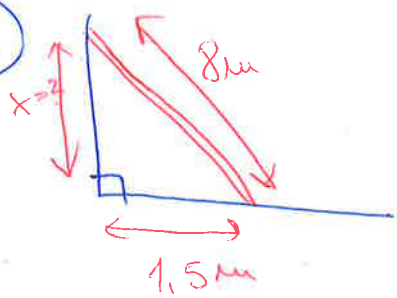
$d^2 = 64 + 64$

$\sqrt{d^2} = \sqrt{128}$ /√

$d = \sqrt{64 \cdot 2}$

$d = 8\sqrt{2}\,cm$

8.



P.I.

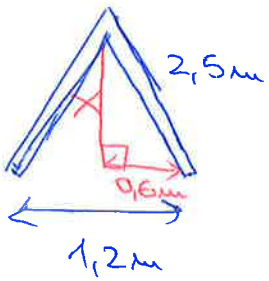
$x^2 = 8^2 - 1{,}5^2$

$x^2 = 64 - 2{,}25$

$x^2 = 61{,}75$

$x \doteq 7{,}9\,m$

b)



$x^2 = 2{,}5^2 - 0{,}6^2$

$x^2 = 6{,}25 - 0{,}36$

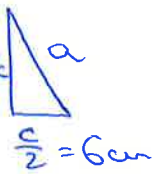
$\sqrt{x^2} = \sqrt{5{,}89}$ /√

$x \doteq 2{,}4\,m$

9.

$a = ?$

$\sigma = ?$



$a^2 = 15c^2 + (\frac{c}{2})^2$

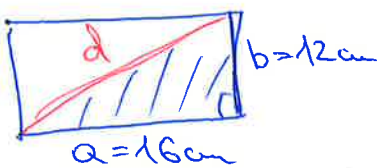
$a^2 = 9{,}1^2 + 6^2$

$a^2 = 82{,}81 + 36$

$\sqrt{a^2} = \sqrt{118{,}81}$ /√

$a \doteq 13{,}5\,cm$

10.



$d^2 = a^2 + b^2$

$d^2 = 16^2 + 12^2$

$d^2 = 256 + 144$

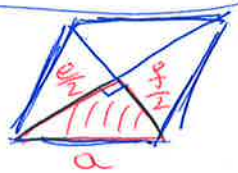
$\sqrt{d^2} = \sqrt{400}$ /√

$d = 20\,cm$

11.

$f = ?$

$p =$



$(\frac{f}{2})^2 = a^2 - (\frac{e}{2})^2$

$(\frac{f}{2})^2 = 1{,}3^2 - 0{,}5^2$

$(\frac{f}{2})^2 = 1{,}69 - 0{,}25$

$\sqrt{(\frac{f}{2})^2} = \sqrt{1{,}44}$ /√

$\frac{f}{2} = 1{,}2\,dm$

$\rightarrow f = 2{,}4\,dm$

$p = \frac{e \cdot f}{2}$

$p = \frac{1 \cdot 2{,}4}{2}$

$p = 1{,}2\,dm^2$

12 a)

$o = ?$

$a^2 = \left(\frac{e}{2}\right)^2 + \left(\frac{f}{2}\right)^2$

$a^2 = 7{,}5^2 + 6^2$

$a^2 = 56{,}25 + 36$

$\sqrt{a^2} = \sqrt{92{,}25}$ /√

$a \doteq 9{,}6\ cm$

$o = 4 \cdot a$

$o = 4 \cdot 9{,}6$

$o = 38{,}4\ cm$

b) $o = 40dm \rightarrow a = o : 4$

$a = 10dm$

$e = 10dm$

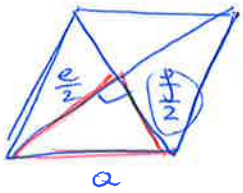
$p = ?$

$p = \frac{e \cdot f}{2}$

$p = \frac{10 \cdot 10\sqrt{3}}{2}$

$p = \frac{100\sqrt{3}}{2}$

$p = 50\sqrt{3}\ dm^2$



$\left(\frac{f}{2}\right)^2 = a^2 - \left(\frac{e}{2}\right)^2$

$\left(\frac{f}{2}\right)^2 = 10^2 - 5^2$

$\left(\frac{f}{2}\right)^2 = 100 - 25$

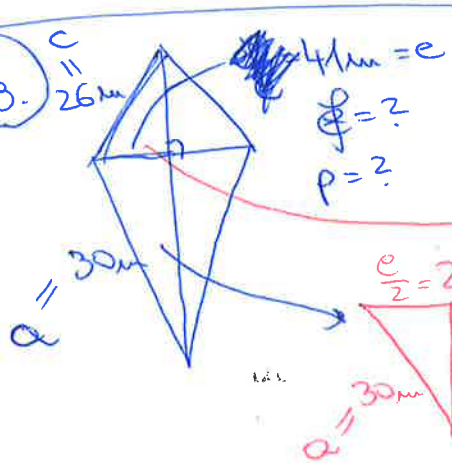
$\left(\frac{f}{2}\right)^2 = \sqrt{75}$ /√

$\frac{f}{2} = \sqrt{25 \cdot 3}$

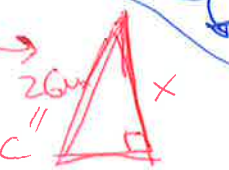
$\frac{f}{2} = 5\sqrt{3}$

$f = 10\sqrt{3}dm$

13.



$p = \frac{e \cdot f}{2}$



$y^2 = a^2 - \left(\frac{e}{2}\right)^2$

$y^2 = 30^2 - 20{,}5^2$

$y^2 = 900 - 420{,}25$

$\sqrt{y^2} = \sqrt{479{,}75}$ /√

$y \doteq 21{,}9\ m$

$\approx 22m$

$x^2 = c^2 - \left(\frac{e}{2}\right)^2$

$x^2 = 26^2 - 20{,}5^2$

$x^2 = 676 - 420{,}25$

$\sqrt{x^2} = \sqrt{255{,}75}$ /√

$x \doteq 16m$

$f = x + y$

$f = 22m + 16m$

$f = 38m$

$p = \frac{e \cdot f}{2}$

$p = \frac{41 \cdot 38}{2}$

$p = 779m^2$