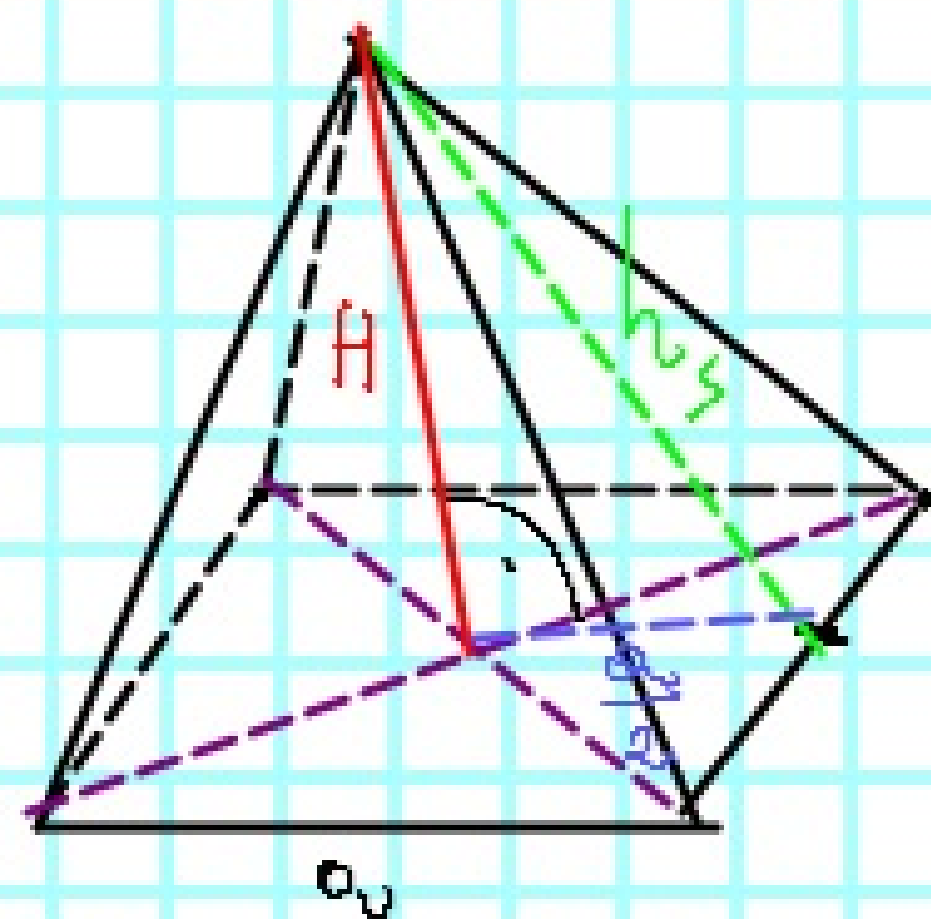


ostrosłup prawidłowy owiany



H - wysokość ostrosłupa

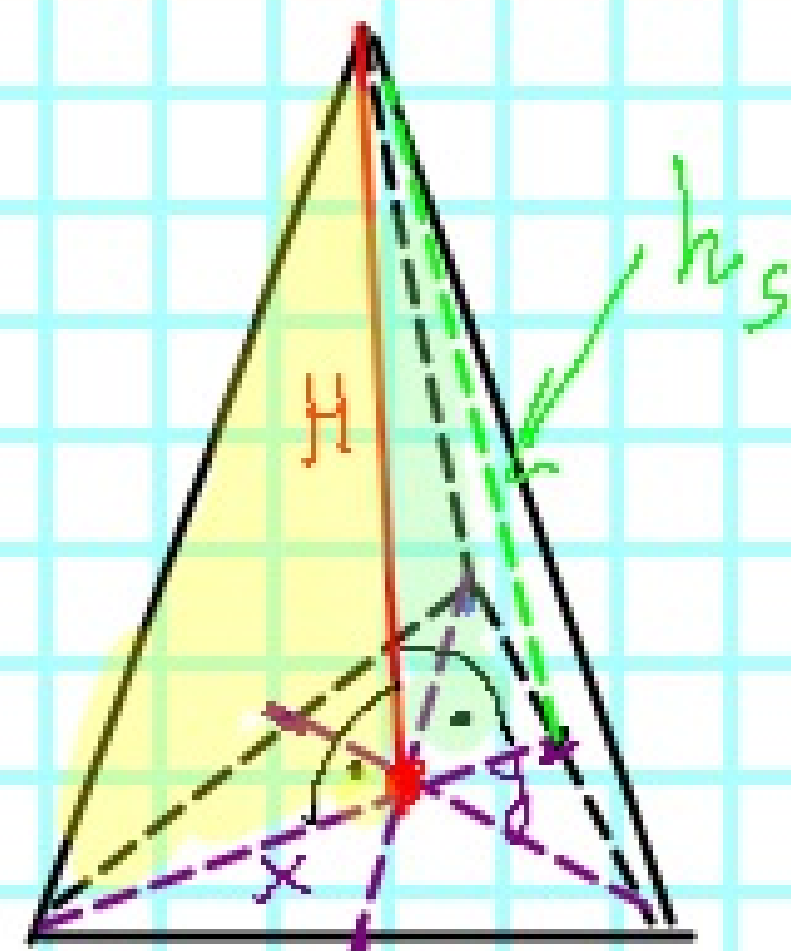
h_s - wysokość ściany bocznej

a - krawędź podstawy

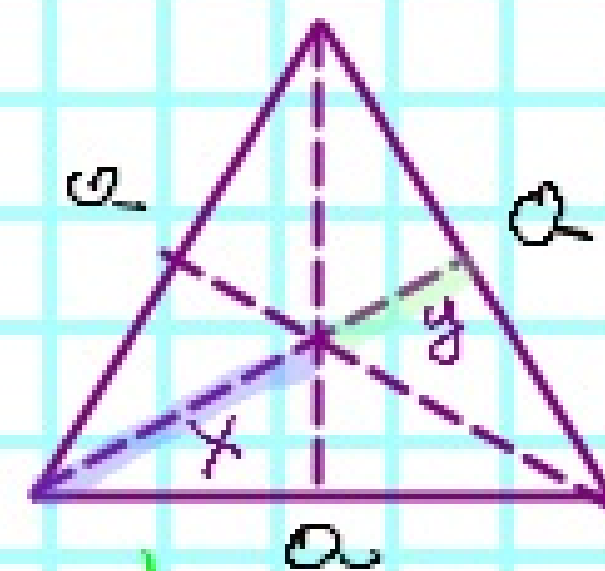
zadanie domowe

1, 4/18g

ostrosłup prawidłowy trójkatny



podstawa



h_s - wysokość ściany bocznej

$$x + y = h_p$$

h_p - wysokość podstawy

$$h_p = \frac{a\sqrt{3}}{2}$$

$$x = \frac{2}{3} h_p$$

$$x = \frac{2}{3} \cdot \frac{a\sqrt{3}}{2}$$

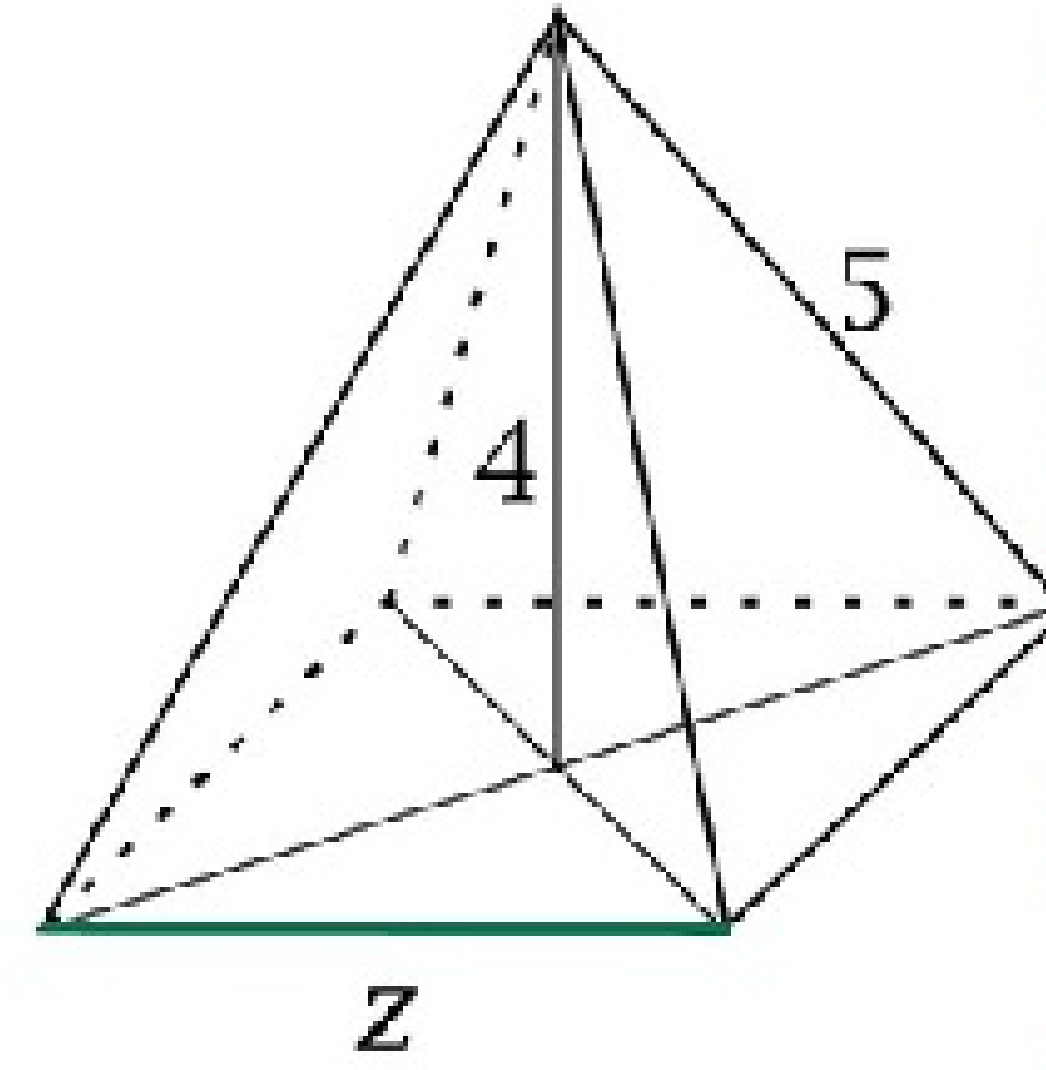
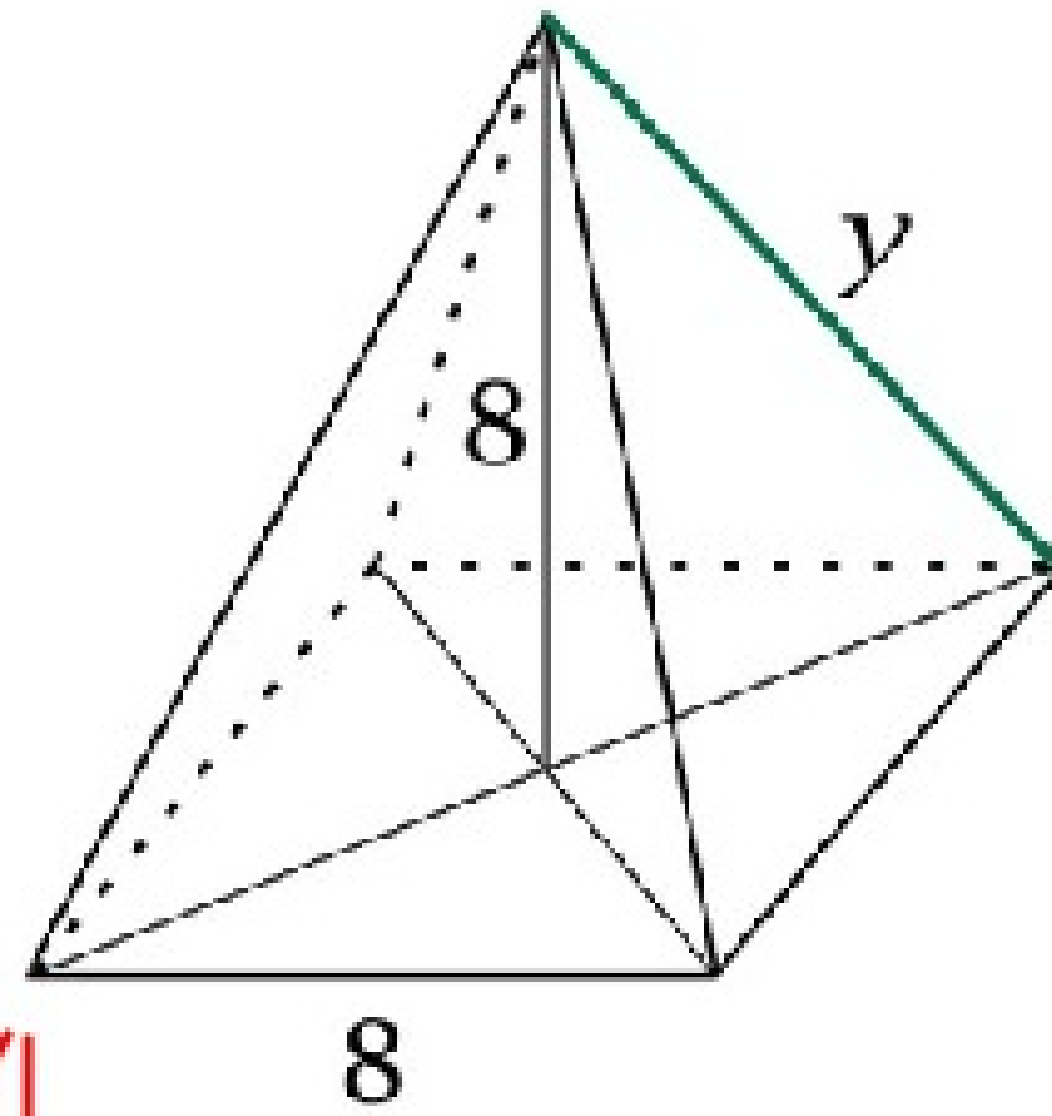
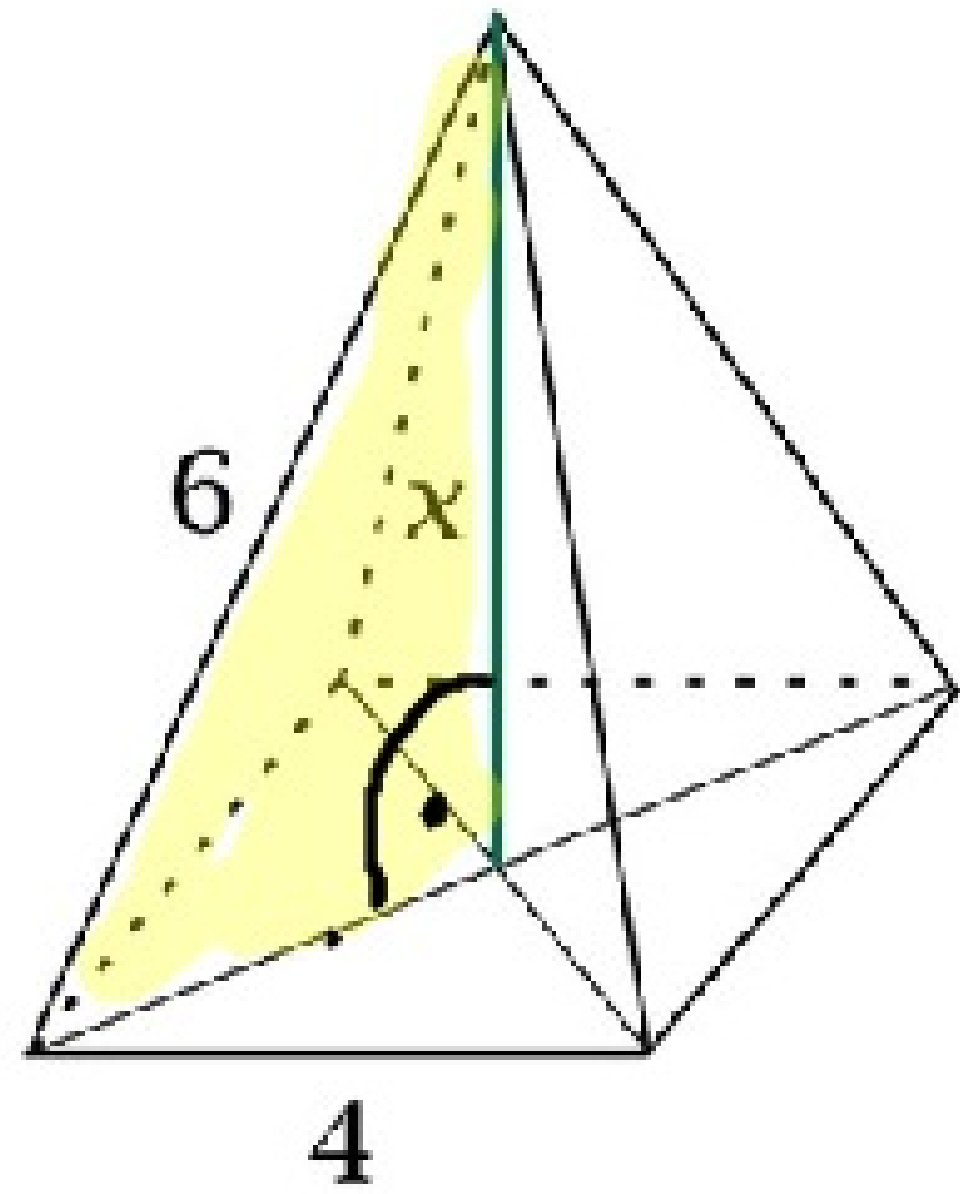
$$x = \frac{a\sqrt{3}}{3}$$

$$y = \frac{1}{3} h_p$$

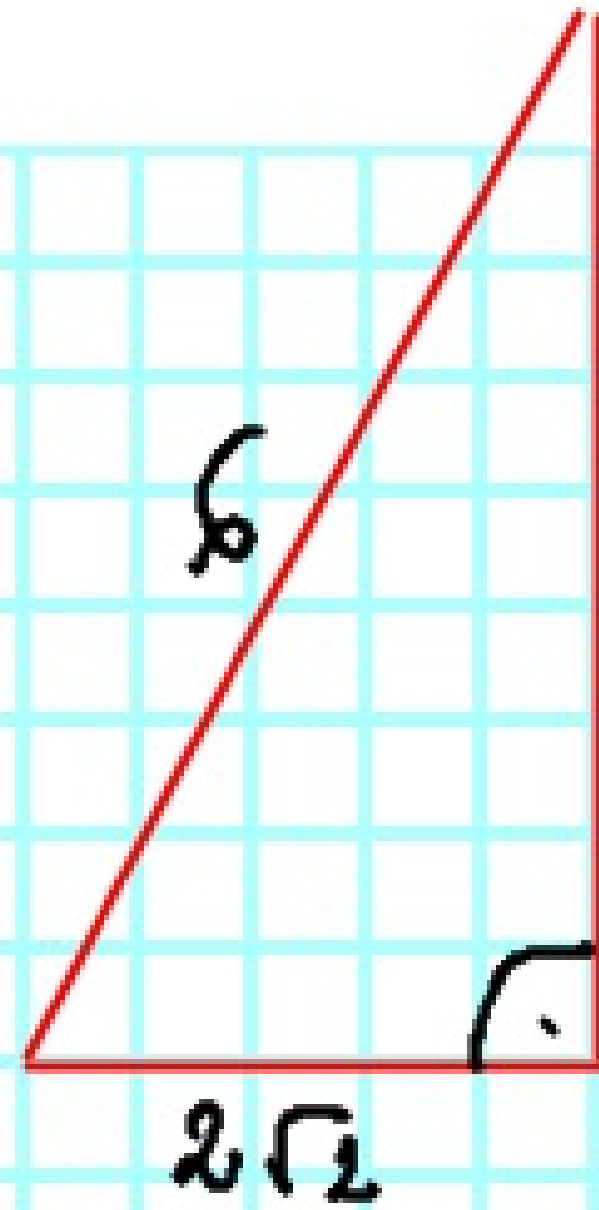
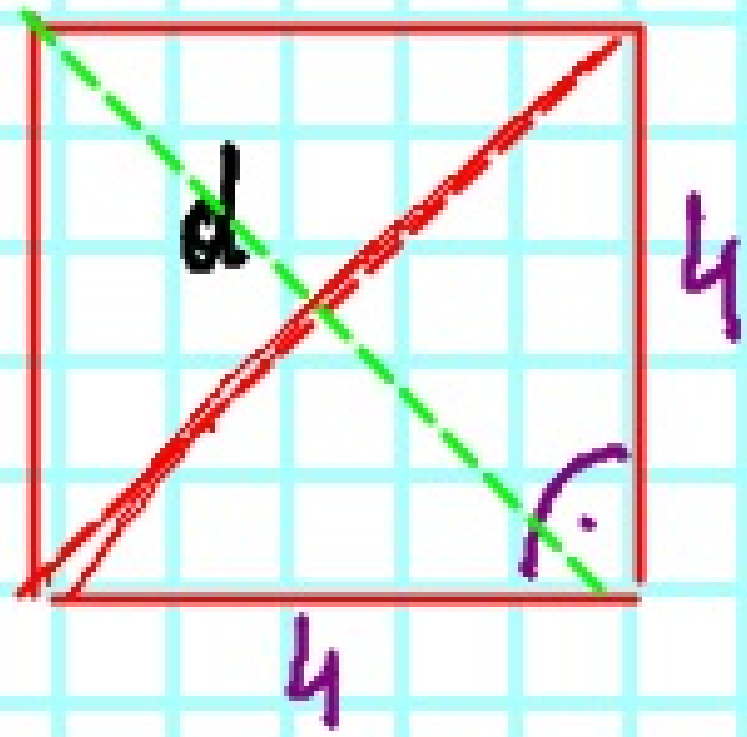
$$y = \frac{1}{3} \cdot \frac{a\sqrt{3}}{2}$$

$$y = \frac{a\sqrt{3}}{6}$$

1. Poniżej narysowano ostrosłupy prawidłowe czworokątne. Oblicz długości odcinków oznaczonych literami.



podstawa



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

$$d = 4\sqrt{2}$$

$$x^2 + (2\sqrt{2})^2 = 6^2$$

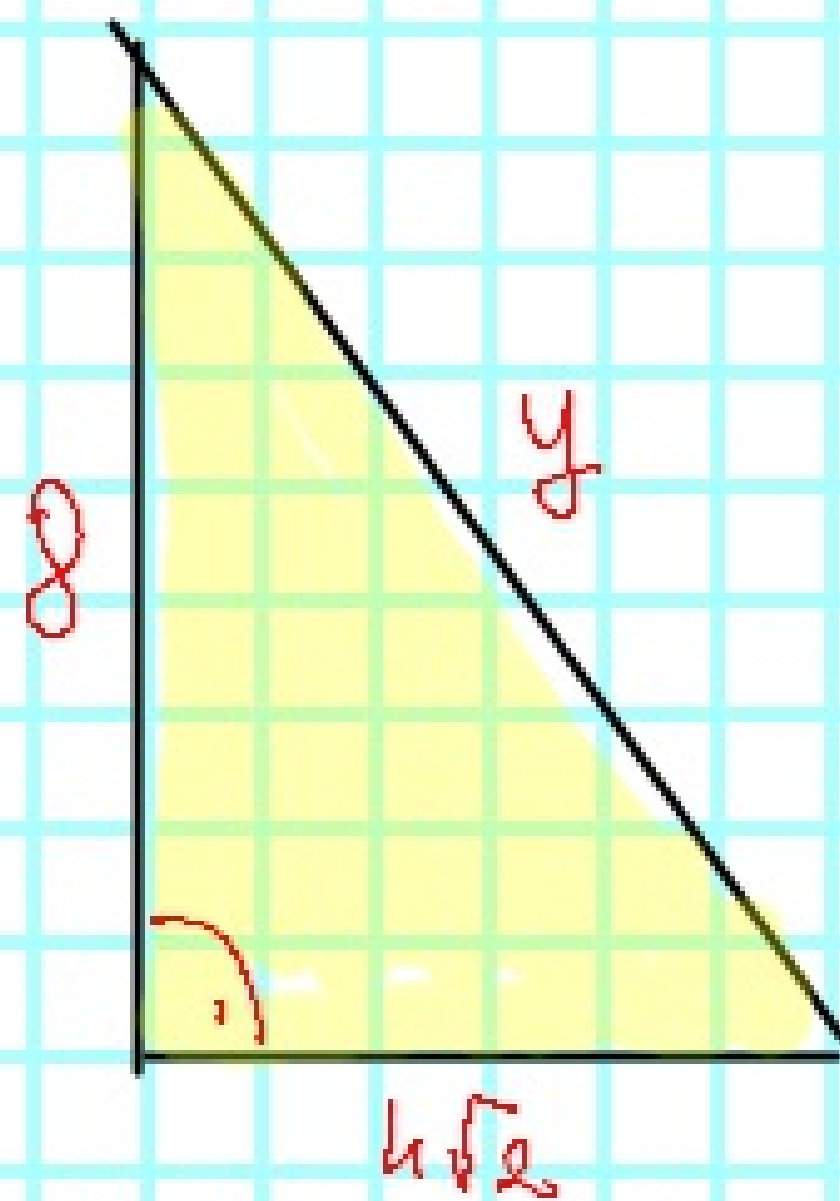
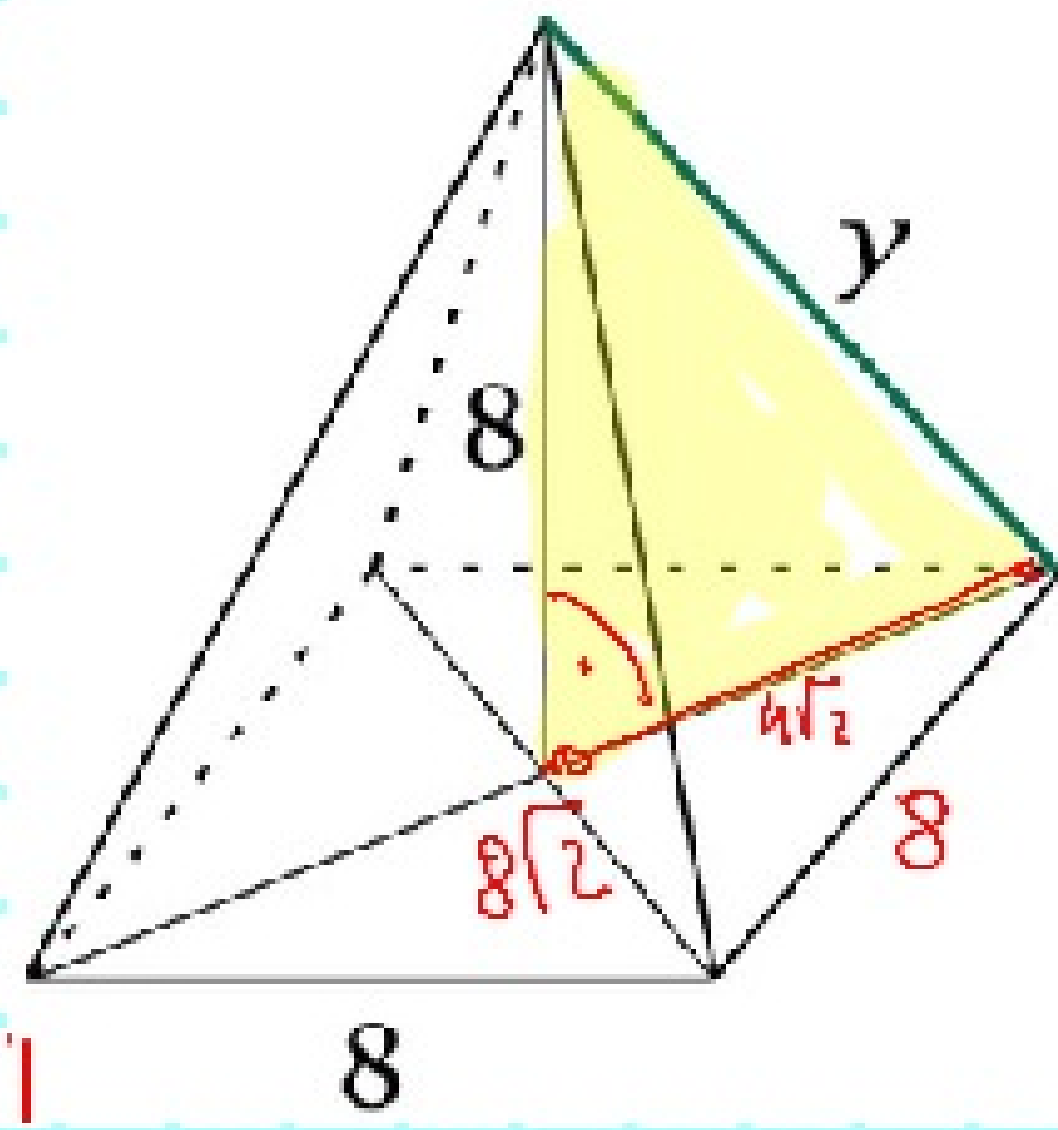
$$x^2 + 4 \cdot 2 = 36$$

$$x^2 = 36 - 8$$

$$x^2 = 28$$

$$x = \sqrt{28}$$

$$x = \sqrt{4 \cdot 7} = 2\sqrt{7}$$



$$8^2 + (4\sqrt{2})^2 = y^2$$

$$64 + 16 \cdot 2 = y^2$$

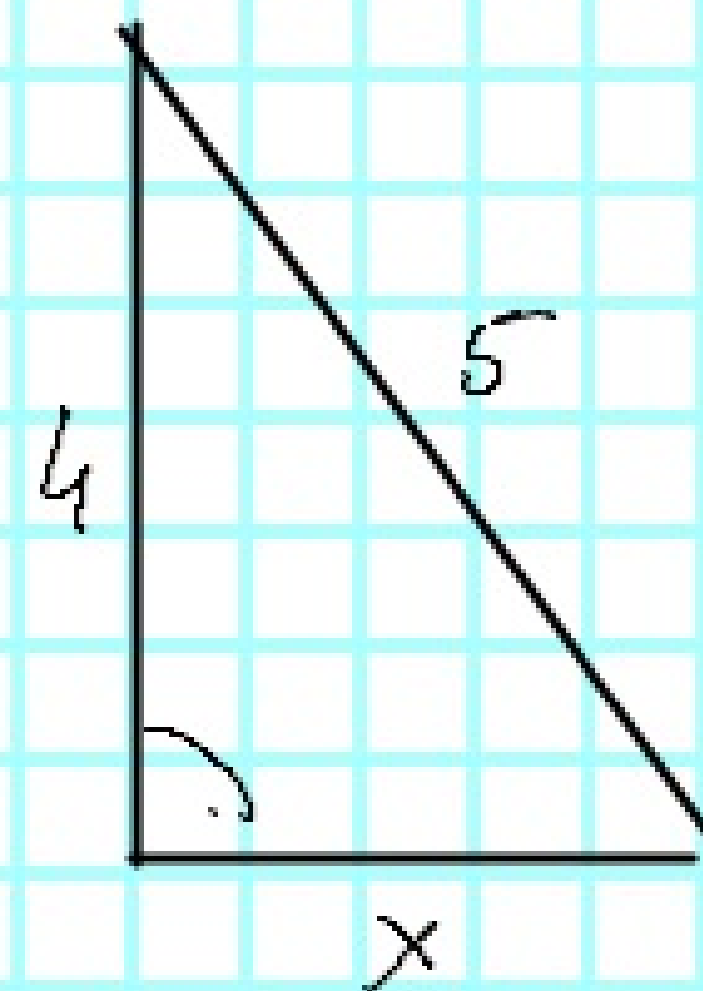
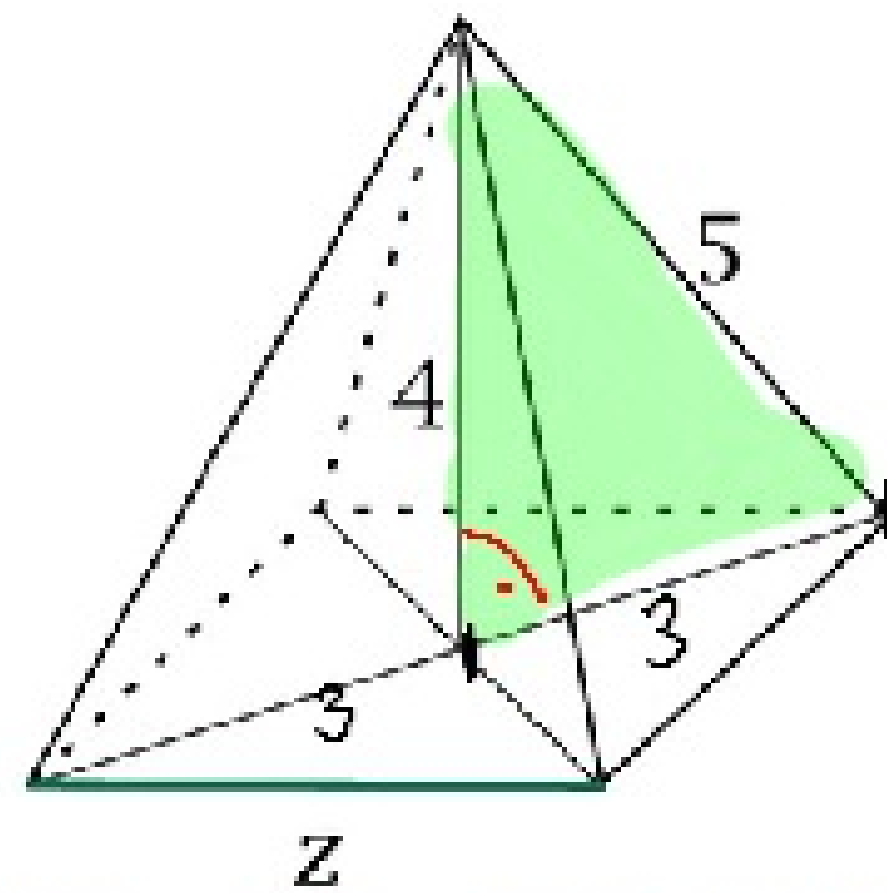
$$64 + 32 = y^2$$

$$96 = y^2$$

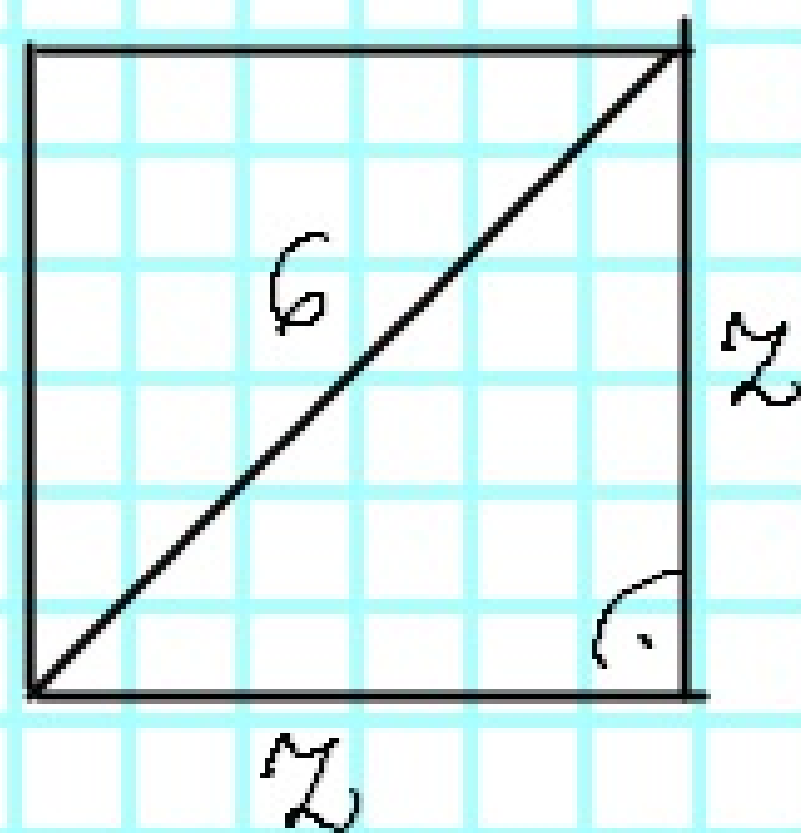
$$\sqrt{96} = y$$

$$y = \sqrt{16 \cdot 6}$$

$$y = 4\sqrt{6}$$



podstawa



$$4^2 + x^2 = 5^2$$

$$16 + x^2 = 25$$

$$x^2 = 25 - 16$$

$$x^2 = 9$$

$$x = 3$$

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

$$6 = z\sqrt{2} \quad | : \sqrt{2}$$

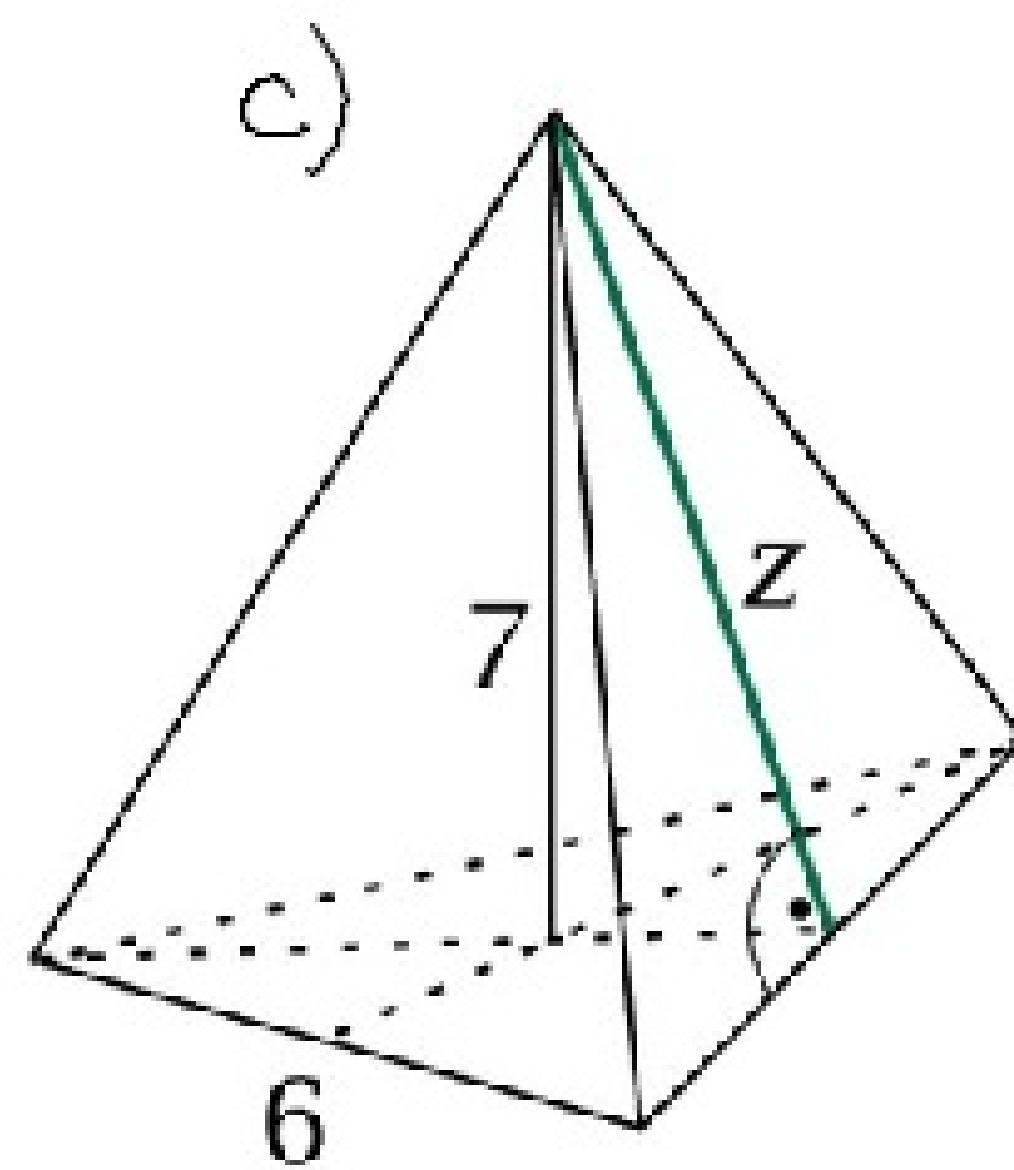
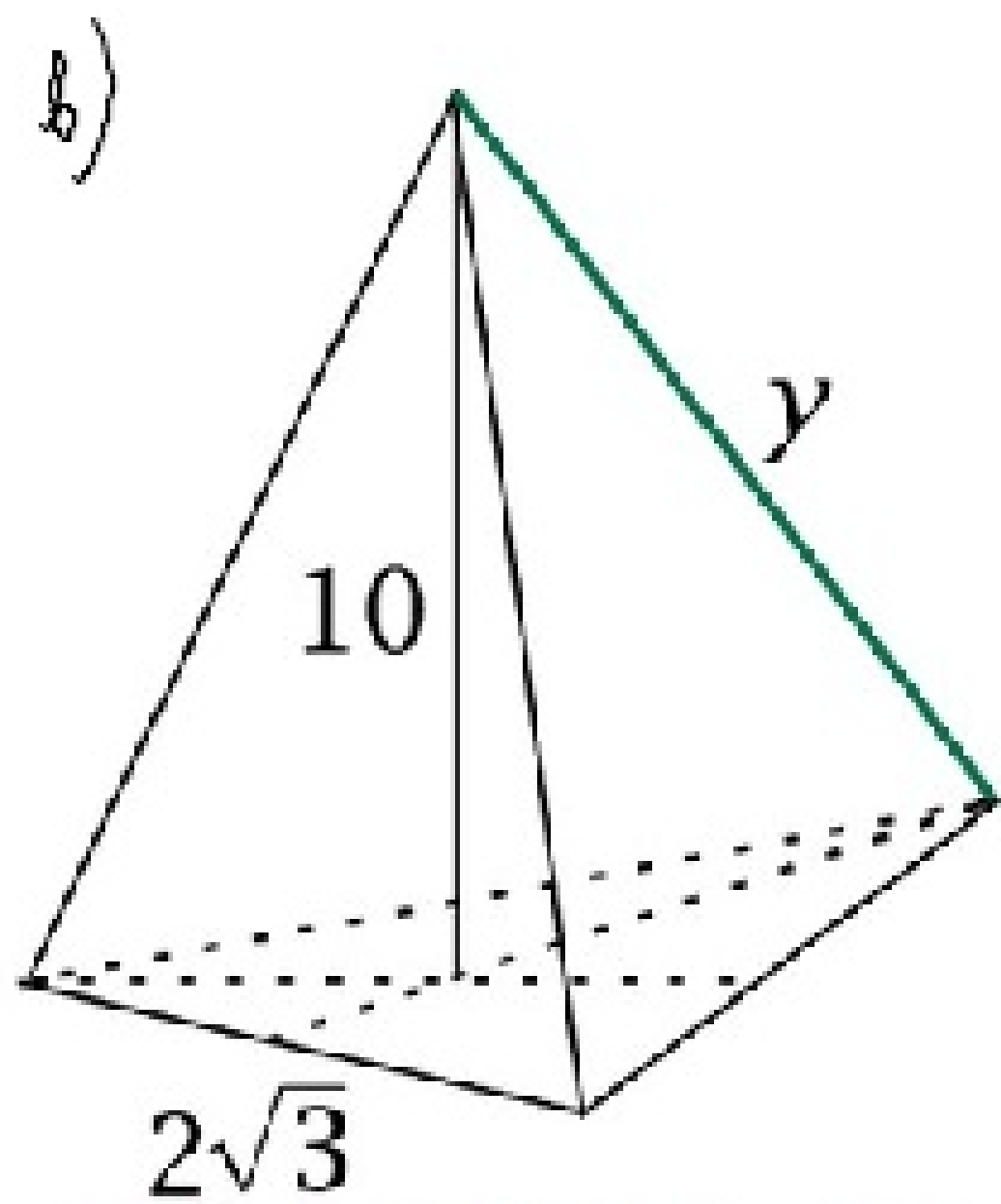
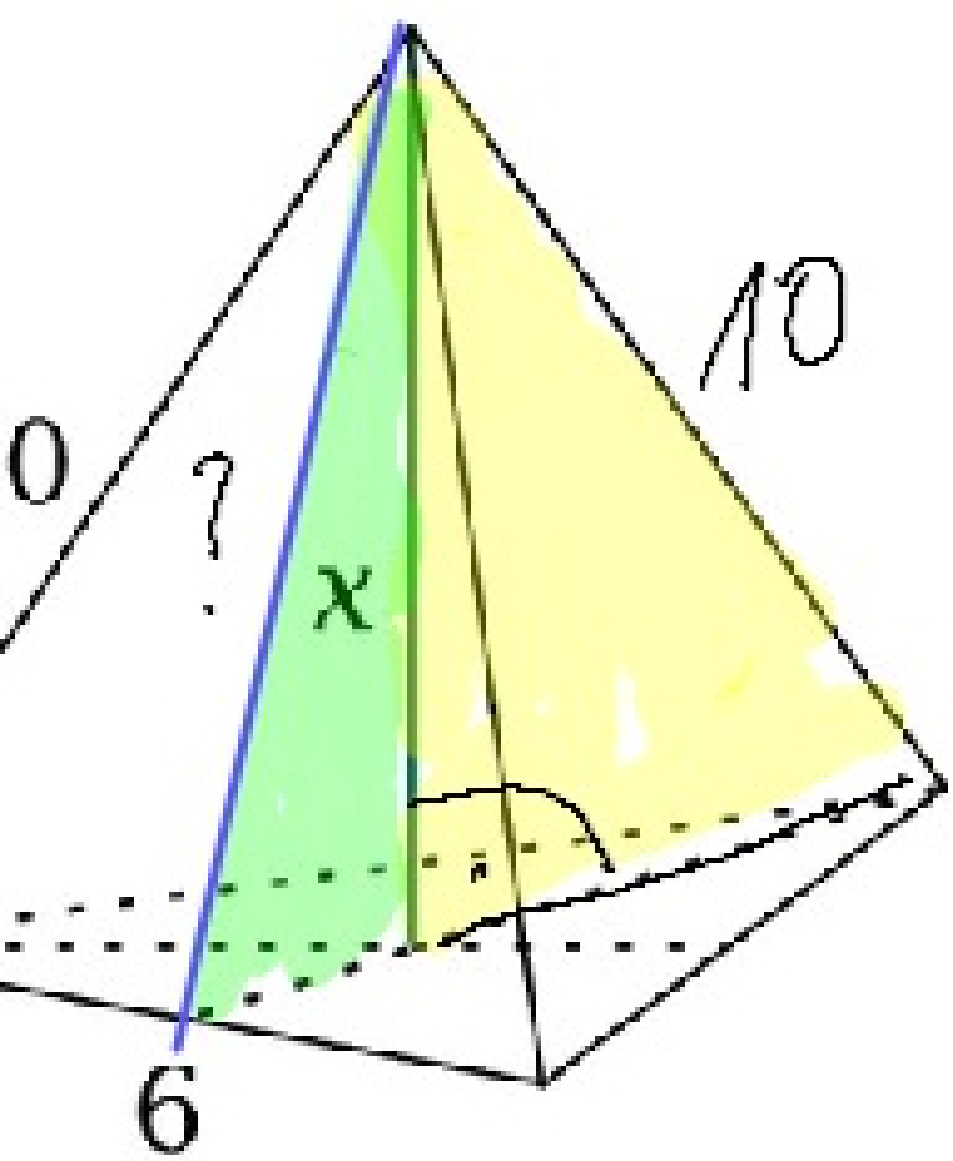
$$\frac{6}{\sqrt{2}} = z$$

$$z = \frac{6}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$z = \frac{6\sqrt{2}}{\sqrt{2}}$$

$$z = 3\sqrt{2}$$

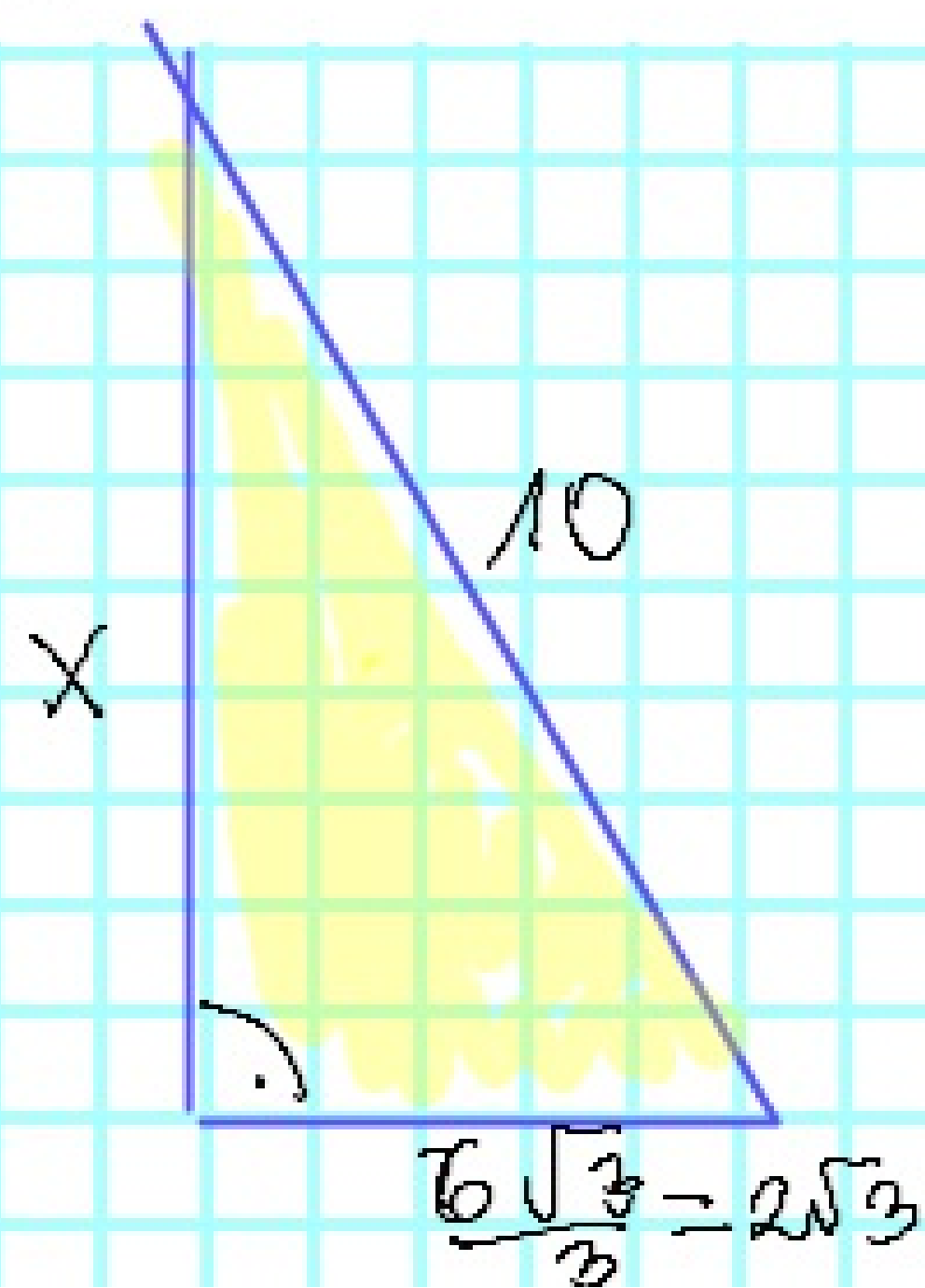
Ważniej narysowano ostrosłupy prawidłowe trójkątne. Oblicz długości krawędzi oznaczonych literami.



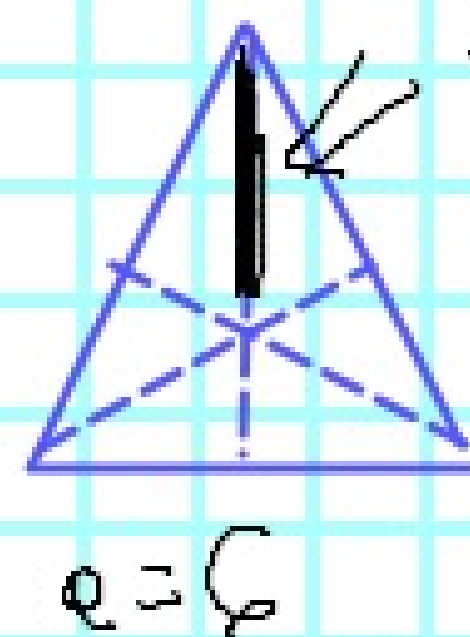
Zadanie domowe

G. b, c / 195

- Nauczy się wronić
- przekształca kwadraty
- wyprowadzić trójkąty równoległe
- itp.



podstawa



$$\frac{e\sqrt{3}}{3} = \frac{6\sqrt{3}}{3} = 2\sqrt{3}$$

$$x^2 + (2\sqrt{3})^2 = 10^2$$

$$x^2 + 4 \cdot 3 = 100$$

$$x^2 + 12 = 100$$

$$x^2 = 100 - 12$$

$$x^2 = 88$$

$$x = \sqrt{88}$$

$$x = \sqrt{4 \cdot 22}$$

$$x = 2\sqrt{22}$$