

Flag pole question

\* 3

Octagon question

$$* y = \frac{2}{3}x + 5 \quad (-4, 8)$$

parallel  $\rightarrow$  same slope  $\frac{2}{3}$

$$y - y_1 = m(x - x_1)$$

$$y - 8 = \frac{2}{3}(x + 4)$$

Undefined slope

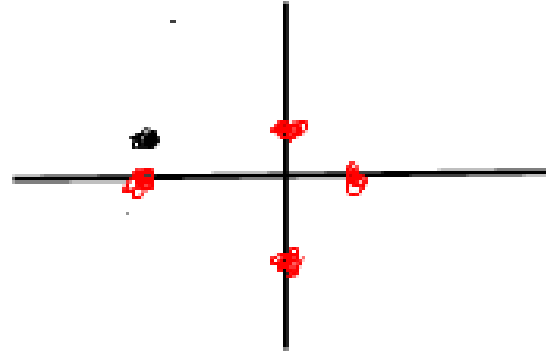
$(-2, 1)$

a)  $(1, 0)$

b)  $(0, 1)$

c)  $(0, -2)$

d)  $(-2, 0)$



Undefined slope

$(-2, 1)$

$(p, q)$

→ No slope → straight up & down

$(1, 0)$

$(0, 1)$

$(0, -2)$

$(-2, 0)$

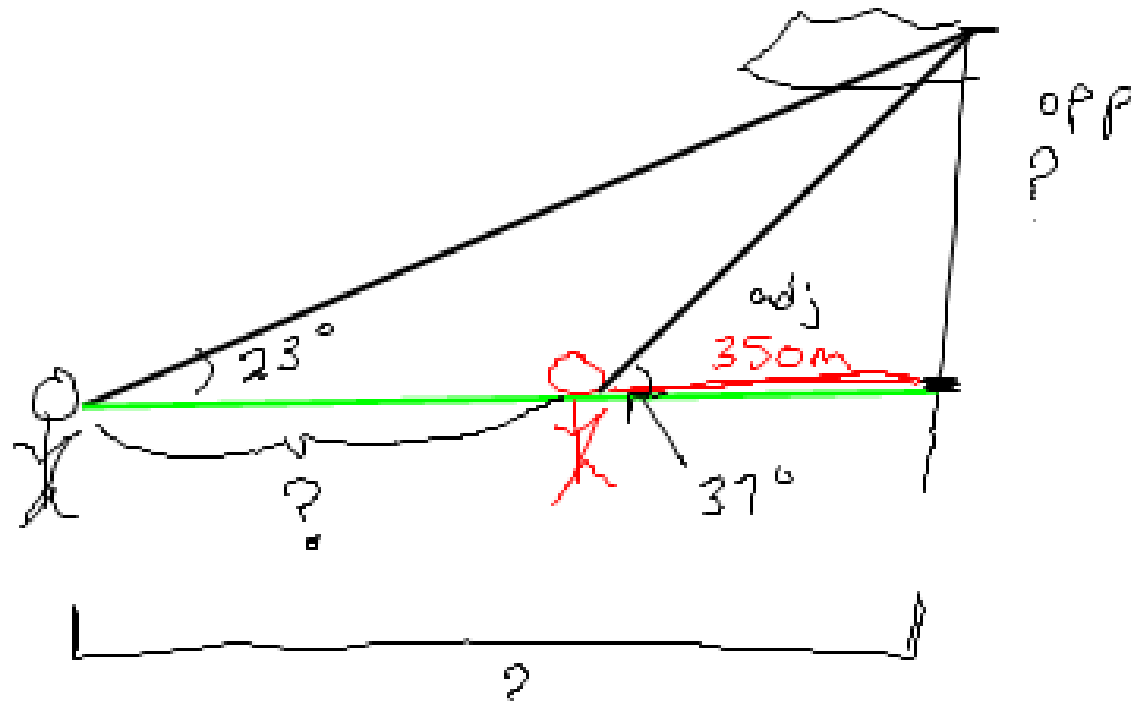
$$y = -\frac{1}{4}x + 12 \quad \text{and} \quad y = (k+2)x - 5$$

are perpendicular

↳ neg reciprocal

$$+4 = k+2$$

$$k = 2$$



$$\tan 37^\circ = \frac{\text{opp}}{350}$$

$$263.74391 \text{ m}$$

$$\tan 23^\circ = \frac{263.74391}{\text{adj}}$$

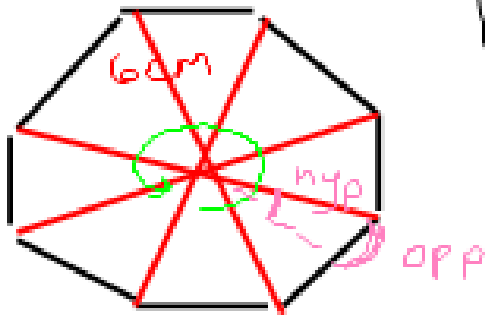
$$\text{adj} = \frac{263.74391}{\tan 23^\circ} = 621.34169 \text{ m}$$

$$621.34169 - 350 = 271.34169 \text{ m}$$

Octagon question

$$360^\circ \div 8 = 45^\circ$$

$$45^\circ \div 2 = 22.5^\circ$$



$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

$$\sin 22.5 = \frac{\text{opp}}{3}$$

$$\text{opp} = 1.148050297$$

Base

$$1.148050297 \cdot 2 = 2.2961005$$

$$\tan 22.5 = \frac{1.148050297}{\text{adj}}$$

$$\text{adj} = 2.771638598 \text{ cm}$$

20cm

Area of base

$$A = 8 \left( \frac{bh}{2} \right)$$

$$= 4(2.296100594)(2.771638598)$$
$$= 25.45584412 \text{ cm}^2$$

$$V = A_{\text{of base}} \cdot h$$

$$= 25.45584412 \cdot 20$$

$$= 509.1168824 \text{ cm}^3$$

No won't  
fit