Good Morning Happy Wednesday!

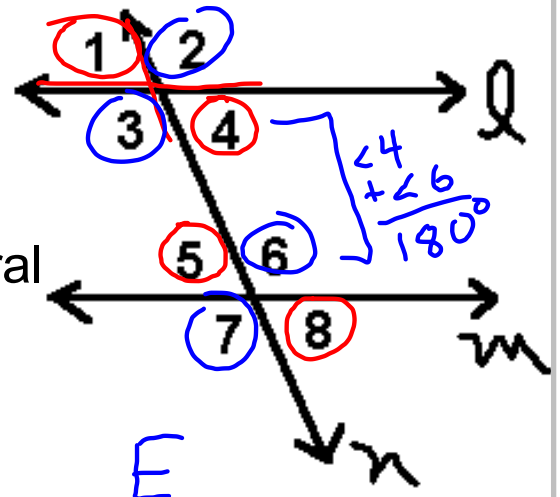
Remember Homeroom Schedule today.

Agenda:
-Check HW and Warm UP

-Angles of Elevation and Depression:

Warm UP:

1) If line *l* and line *m* are parallel and line *n* is a line intersecting both, find all pairs of congruent angles.

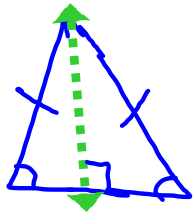


2) How many degrees are in a triangle? 180°

3) Isosceles and Equilateral triangles are special, why?

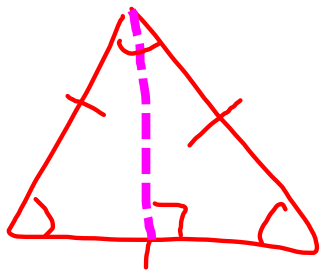
I

- 2 angles =.
- 2 sides =.



E

- All sides =.
- All angles = 60°



HW:

(2) $\tan^{-1}\left(\frac{4}{13}\right) \approx 17.1^\circ$

(4) $\tan^{-1}\left(\frac{11.9}{10}\right) = 49.95^\circ$

$\sim 50.0^\circ$

(6) $\cos^{-1}\left(\frac{4}{5}\right) \approx 36.9^\circ$

(8) $\tan^{-1}\left(\frac{3}{3}\right) = 45^\circ$

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(10) $13 \cdot \tan(32^\circ) = \frac{X}{13} \cdot 13$

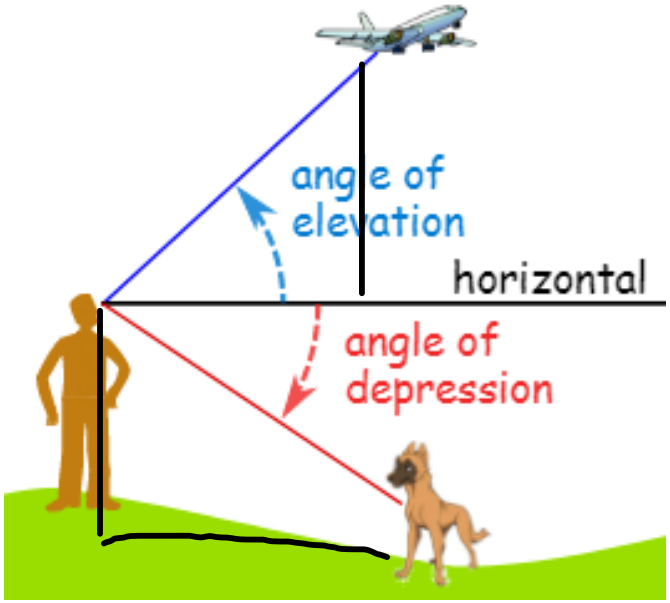
$13\tan(32^\circ) = X \approx 8.1$

(12) $\cos(60) = \frac{X}{11}$

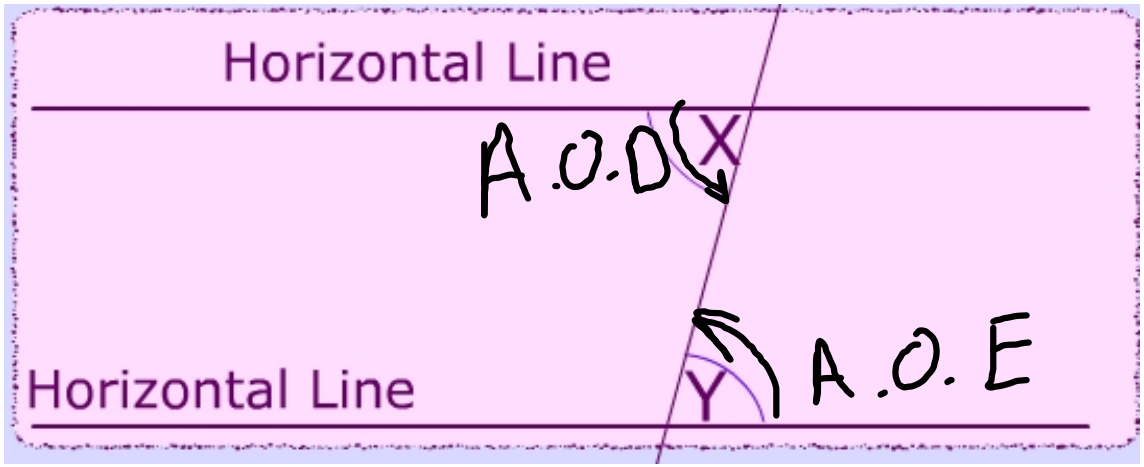
$11\cos(60) = X = 5.5$

Angle of Elevation:
The "upwards" angle from the horizontal to a line of sight from the observer to some point of interest.

Angle of Depression:
The "downwards" angle from the horizontal to a line of sight from the observer to some point of interest.



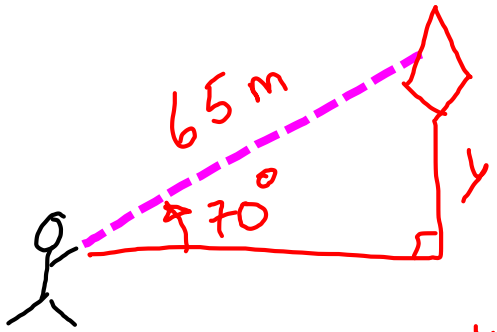
In the picture below which is the angle of elevation and which is the angle of depression?



A.O.P. & A.O.E are Alternate interior

$\angle X = \angle Y$

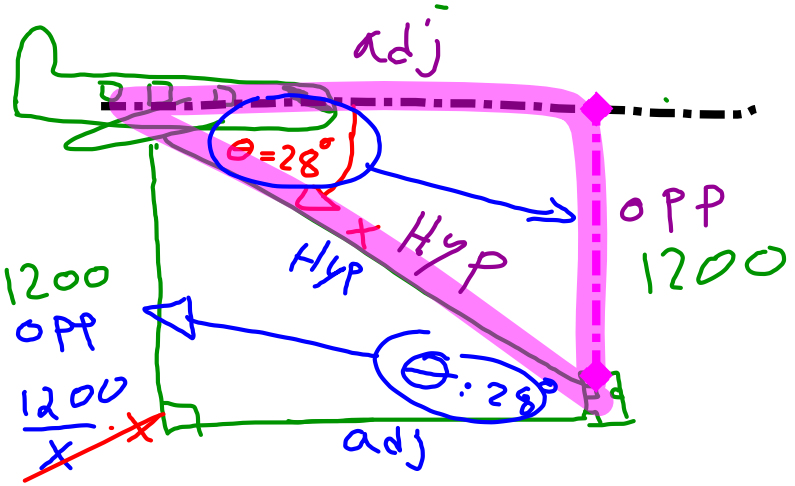
1



$65 \cdot \sin(70^\circ) = \frac{y}{65} \cdot 65$

$65\sin(70^\circ) = y \approx 61.080\text{m}$

2

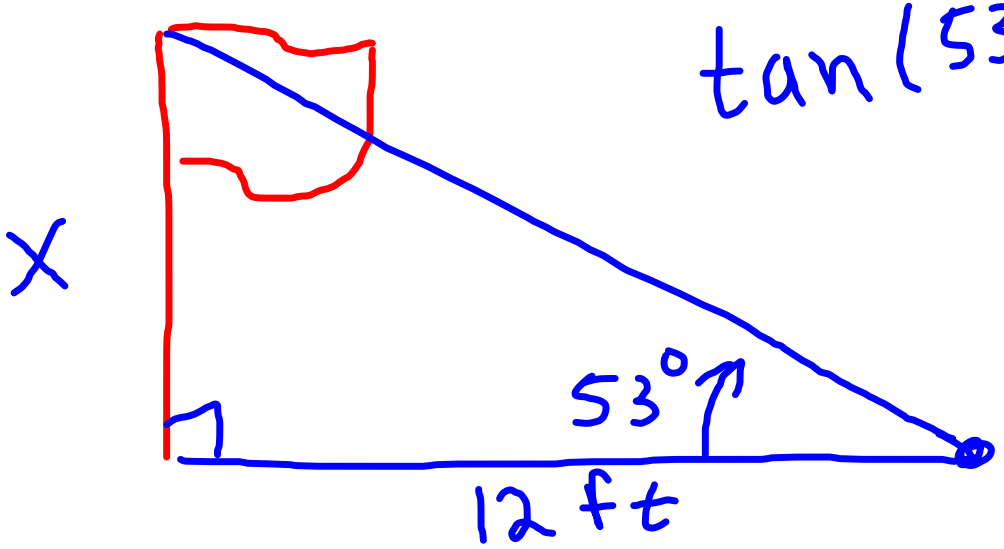


$\sin(28) = \frac{1200}{x} \cdot x$

$X \sin(28) = 1200$

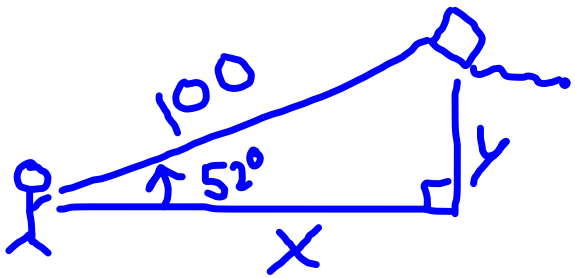
$X = \frac{1200}{\sin(28)} \approx 2556.065\text{m}$

3)



$$\tan(53^\circ) = \frac{x}{12}$$

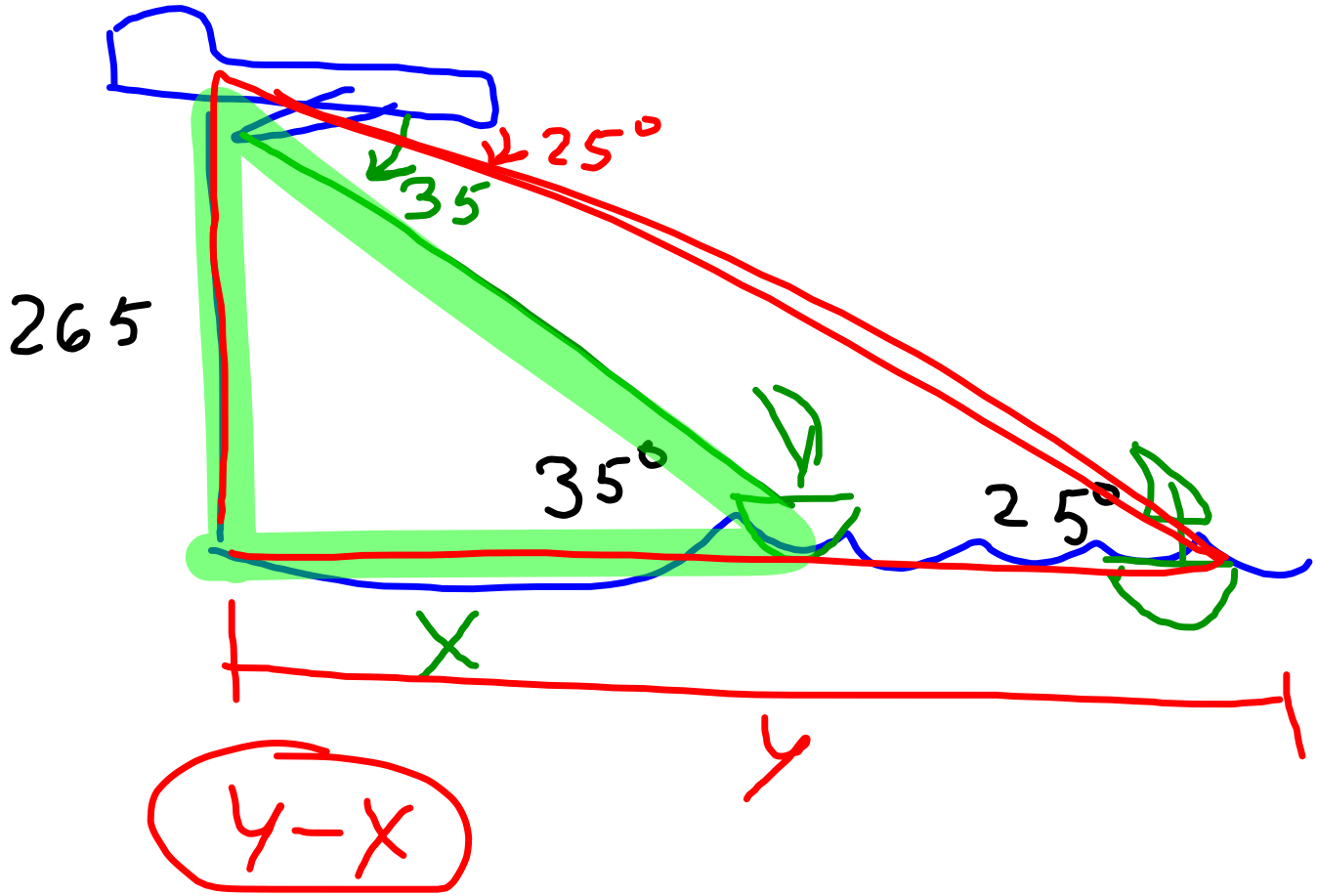
5



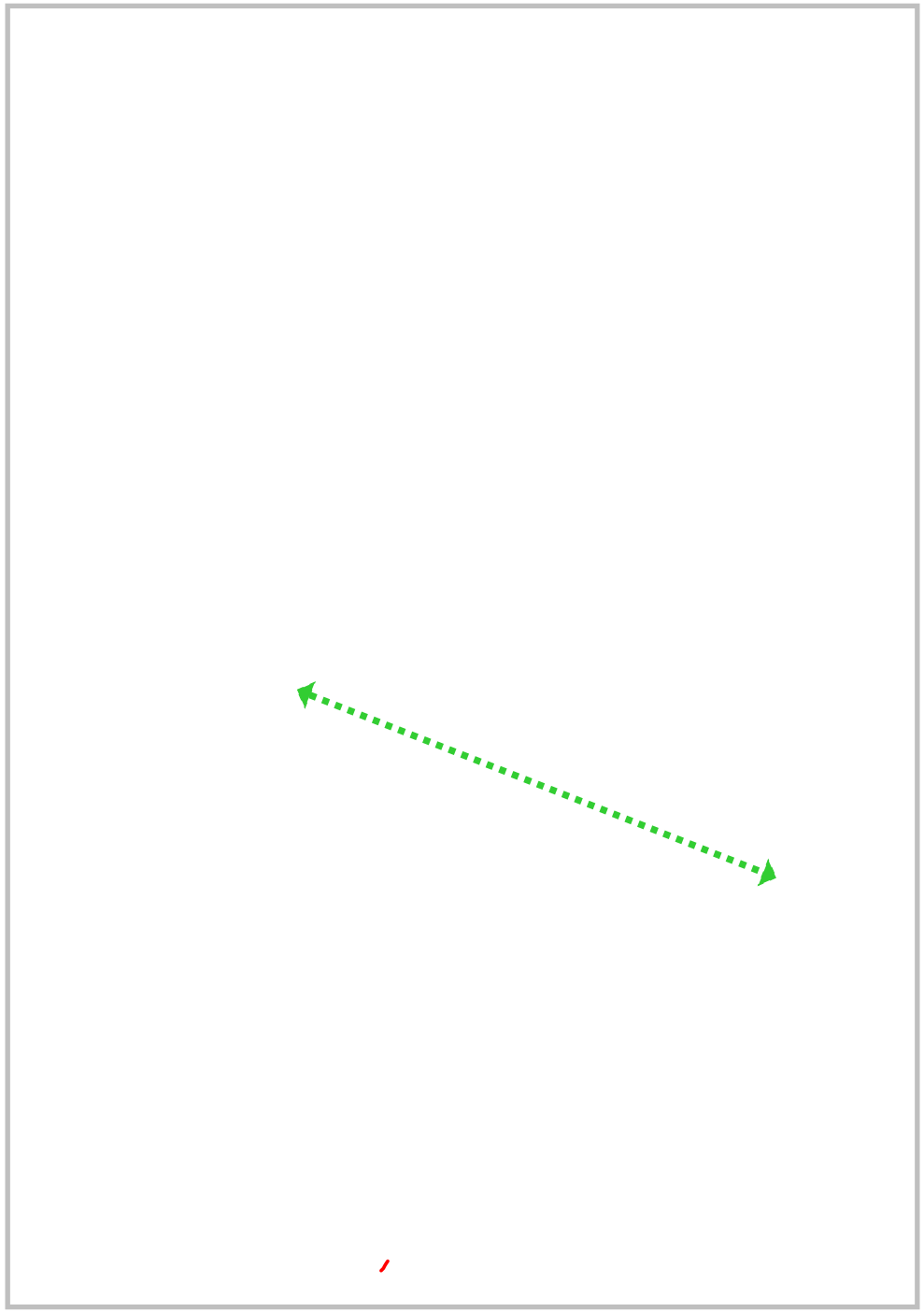
$$\sin(52) = \frac{y}{100}$$

$$\cos(52) = \frac{x}{100}$$

4



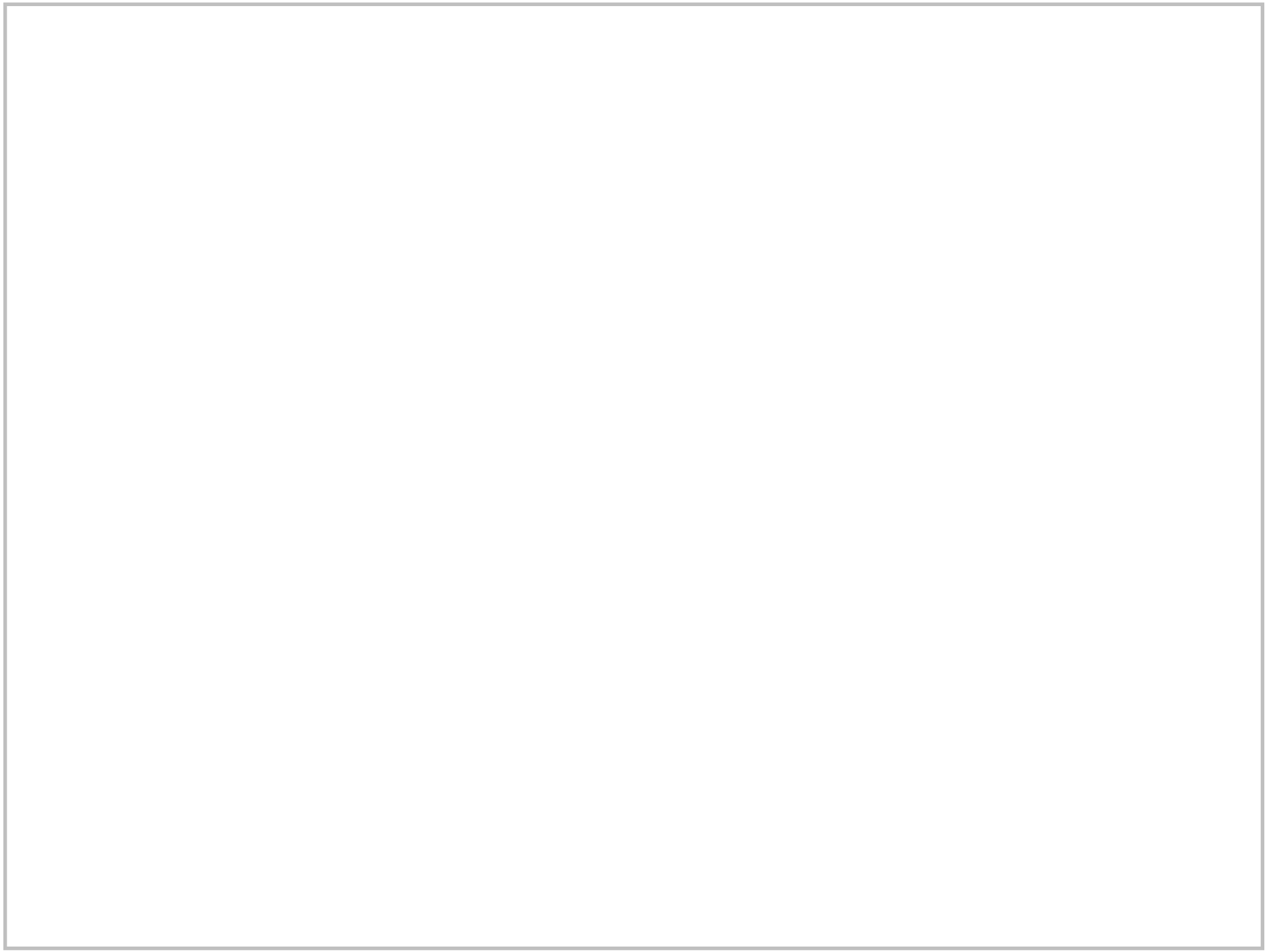
y − x



Title: Jan 15-8:35 AM (9 of 11)

Angle of Elevation: the angle that an observer would raise his or her line of sight above a horizontal line in order to see an object.

Angle of depression: If an observer were UP ABOVE and needed to look down, the angle of depression would be the angle that the person would need to lower lower his or her line of sight



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