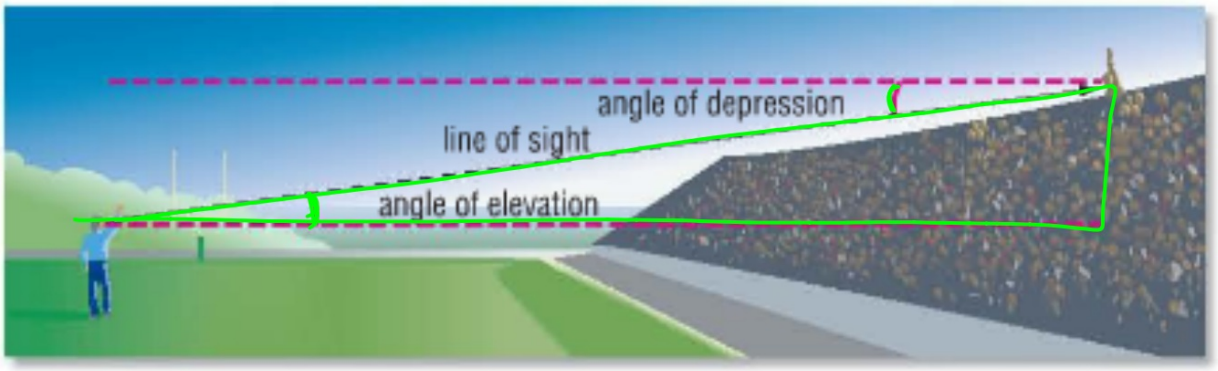
Geometry 8.5
Solve problems using angle of elevation
Solve problems using angle of depression
Use angles of elevation & depression to find distance between 2 objects

horizontal
angle of elevation
angle of depression

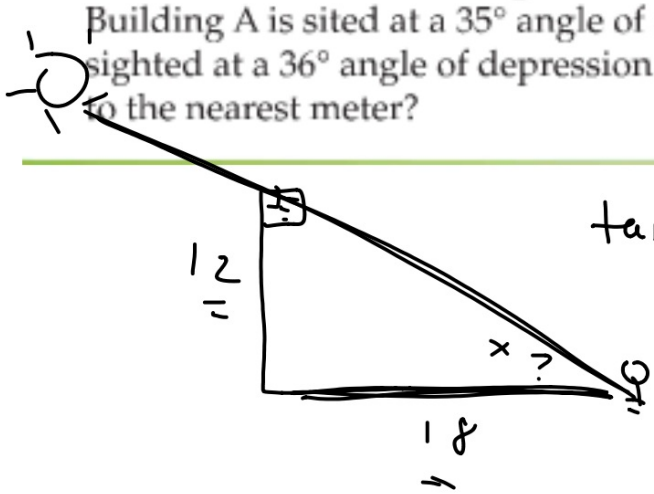
Quiz 8.3-8.4


angle of depression
line of sight
angle of elevation

tough - draw a good sketch

GuidedPractice

3. SKYSCRAPERS Two buildings are sited from atop a 200-meter skyscraper. Building A is sited at a 35° angle of depression, while Building B is sighted at a 36° angle of depression. How far apart are the two buildings to the nearest meter?

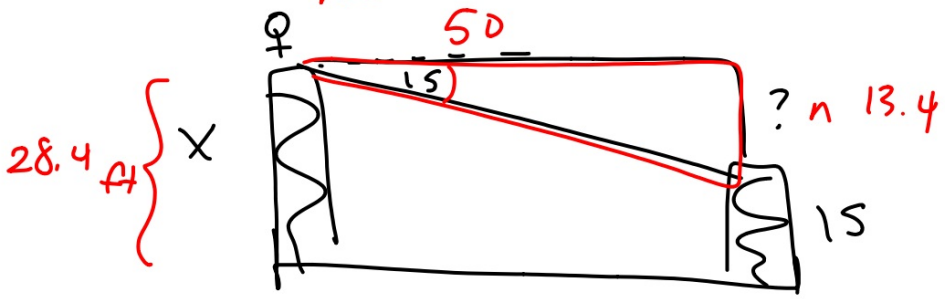


$\tan x = \frac{12}{18}$

$x = 34°$

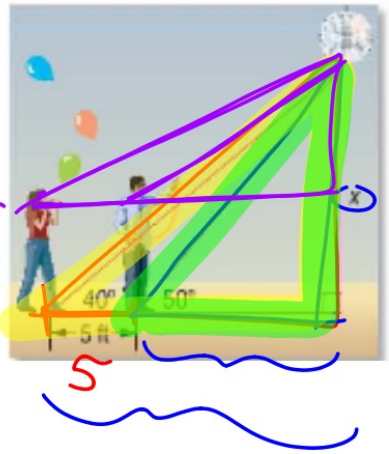
$\tan 15 = \frac{n}{50}$

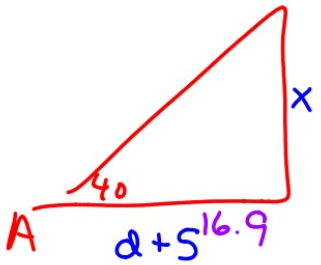
$n = 13.4$

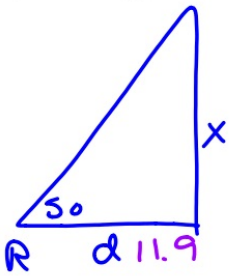


50

3. CCSS **MODELING** Annabelle and Rich are setting up decorations for their school dance. Rich is standing 5 feet directly in front of Annabelle under a disco ball. If the angle of elevation from Annabelle to the ball is 40° and Rich to the ball is 50°, how high is the disco ball?







$\tan 40 = \frac{x}{d+5}$

$\frac{0.8391}{1} = \frac{x}{d+5}$

$0.8391(d+5) = x$

$\tan 50 = \frac{x}{d}$

$\frac{1.1918}{1} = \frac{x}{d}$

$x = 1.1918d$

$0.8391d + 4.1955 = 1.1918d$

$-0.8391d \quad -0.8391d$

$4.1955 = 0.3527d$

$11.9 = d$

$\tan 50 = \frac{x}{11.9}$

$\frac{1.1918}{1} = \frac{x}{11.9}$

$x = 14.2$ ft