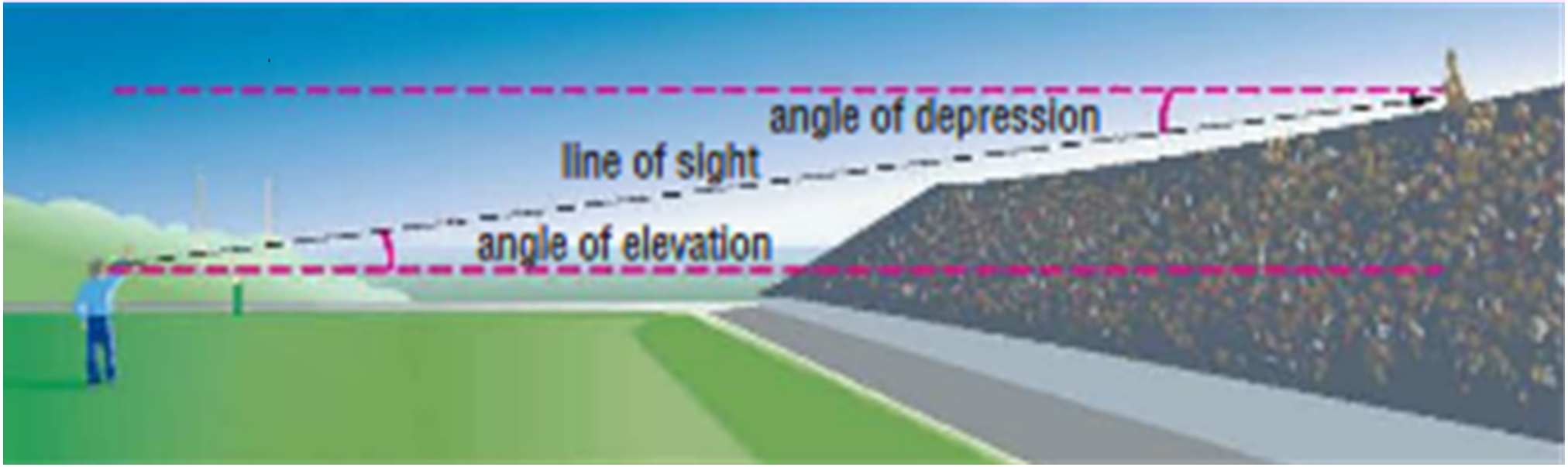
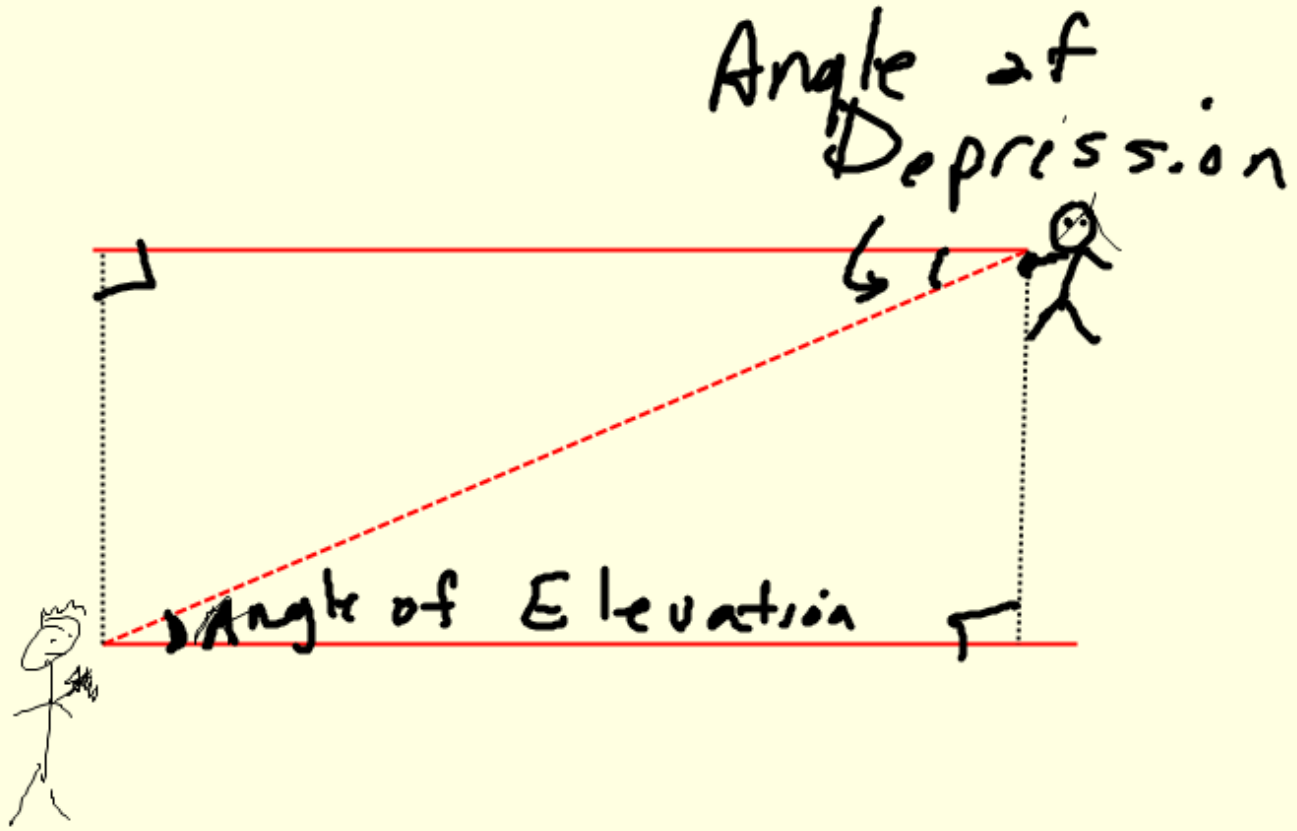
LESSON 8-5

Angles of Elevation and Depression

CCSS

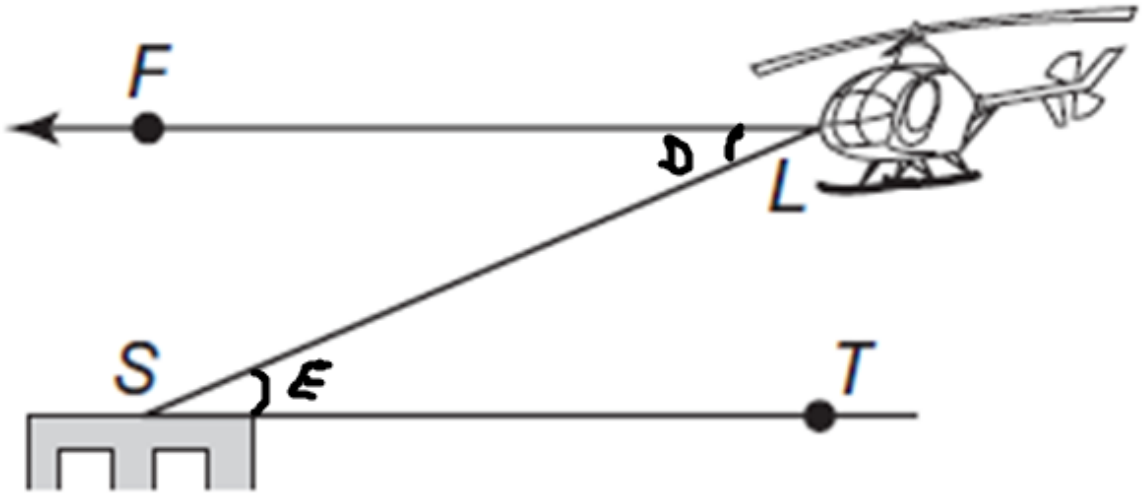
Students will solve problems involving angles of elevation and depression.

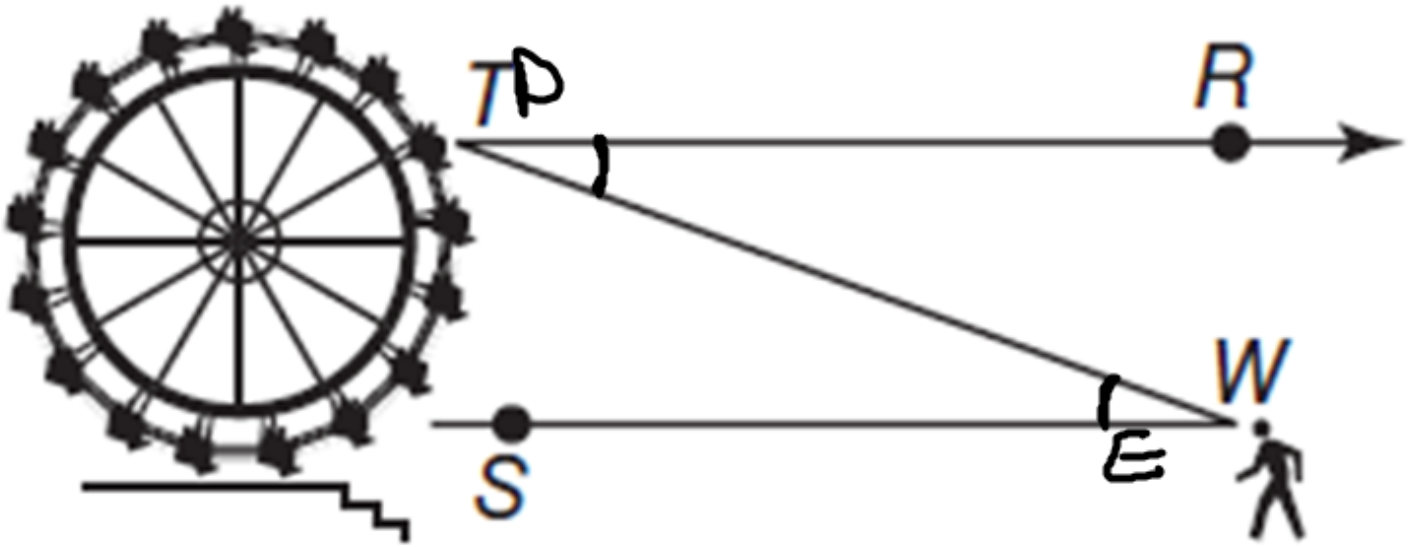


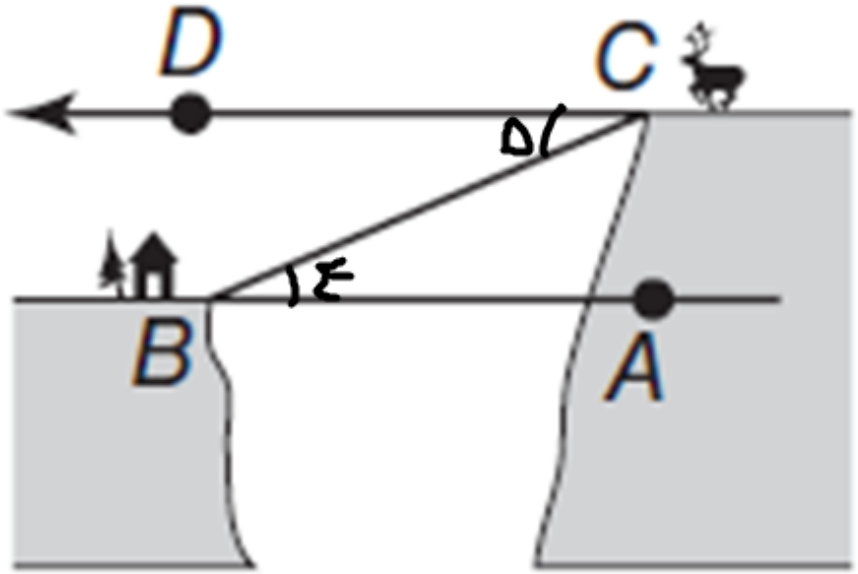


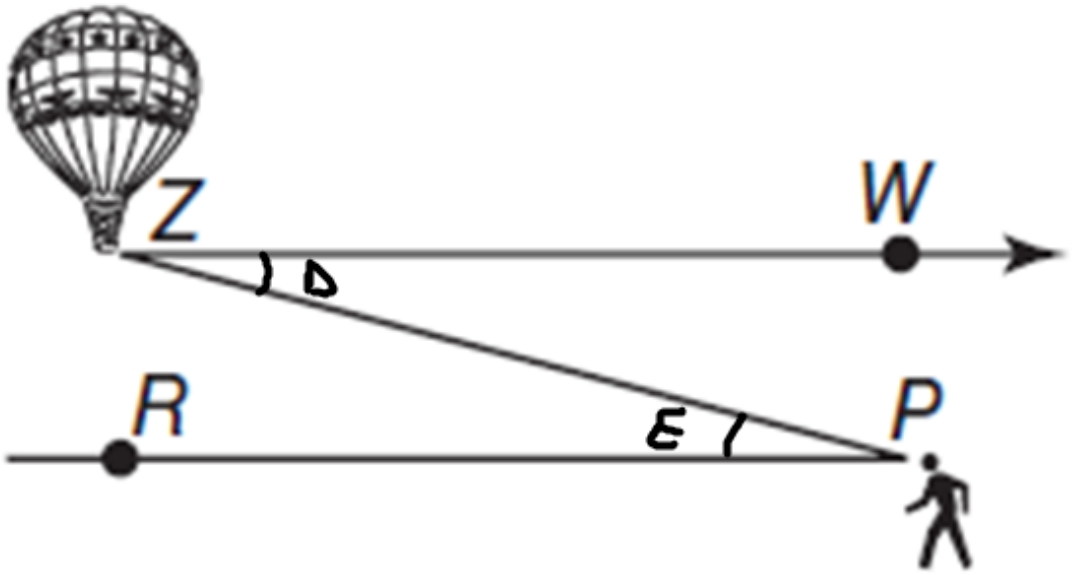
Angle of Elev = Angle of Depress.

Name the angle of elevation or angle of depression.....





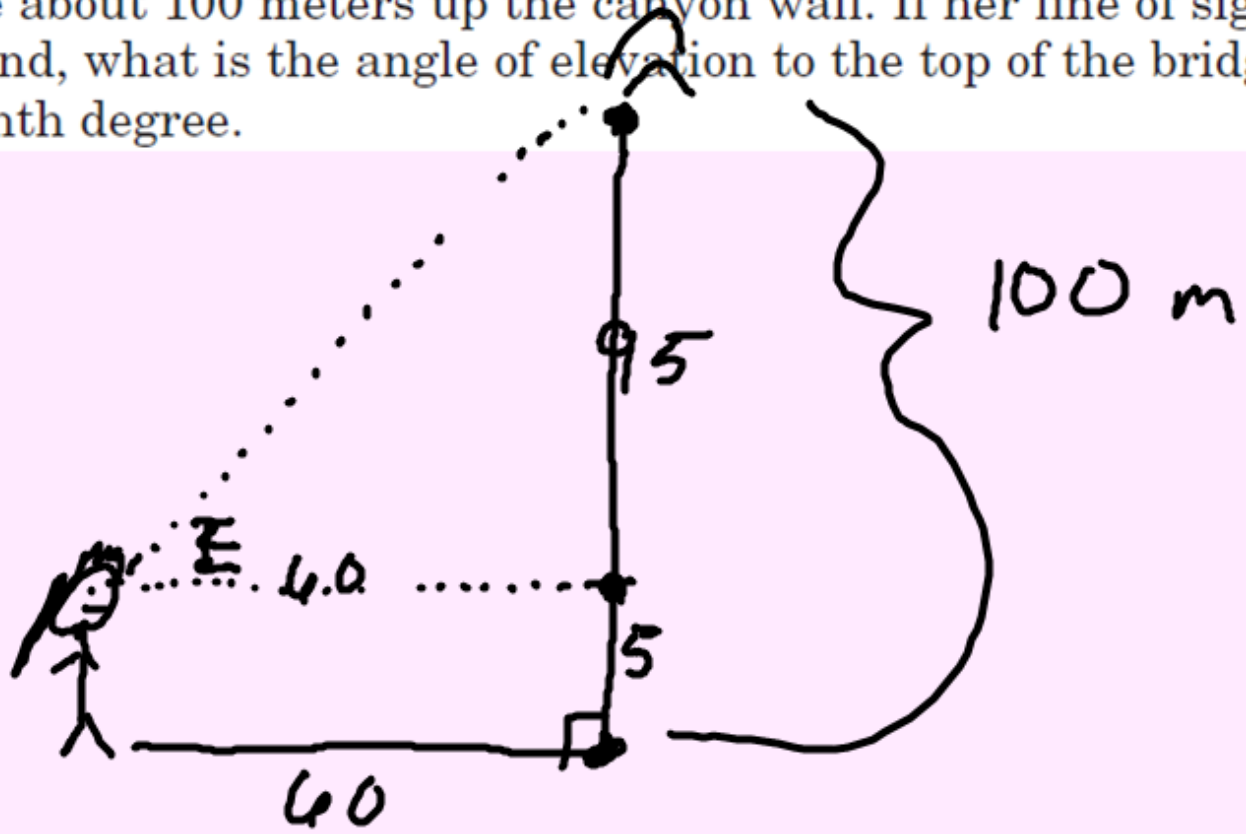

D
C
٥٢
١٤
B
A


Z
W
٥
R
٤
P

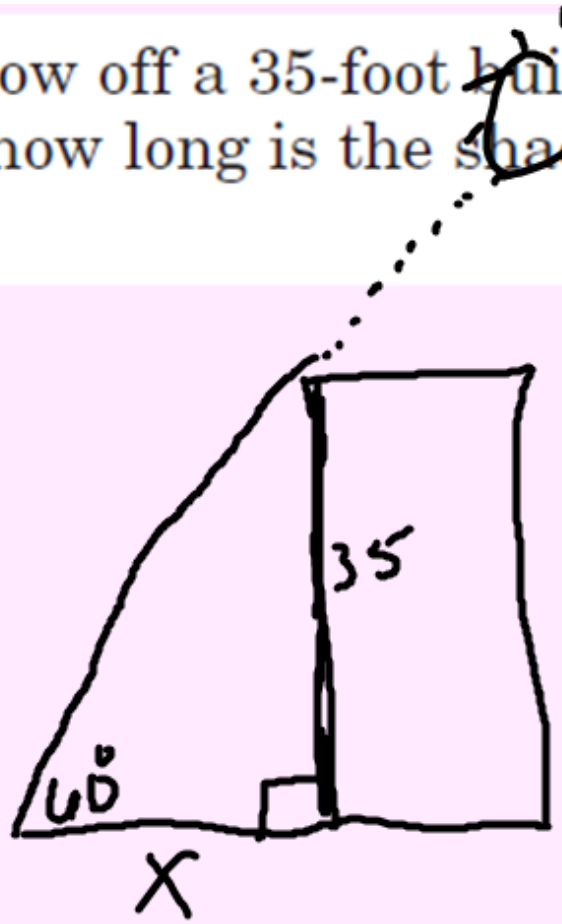
MOUNTAIN BIKING On a mountain bike trip along the Gemini Bridges Trail in Moab Utah, Nabuko stopped on the canyon floor to get a good view of the twin sandstone bridges. Nabuko is standing about 60 meters from the base of the canyon cliff, and the natural arch bridges are about 100 meters up the canyon wall. If her line of sight is 5 metres above the ground, what is the angle of elevation to the top of the bridges? Round to the nearest tenth degree.

$E = \tan^{-1} \frac{95}{60}$

$E = 57.7^{\circ}$



SHADOWS Suppose the sun casts a shadow off a 35-foot building. If the angle of elevation to the sun is 60°, how long is the shadow to the nearest tenth of a foot?



$\tan 60 = \frac{35}{X}$

Switcheroo

$X = \frac{35}{\tan 60}$

$X = 20.2$ ft

Assignment

8-5 Worksheet

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