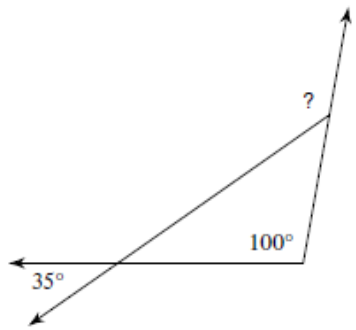
First name: _____ Last name: _____ ID: _____

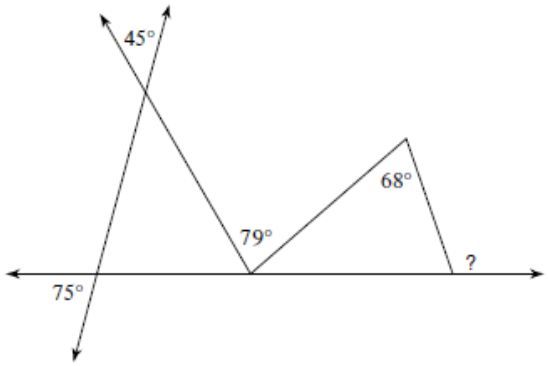
Review 2

1. Find the unknowns.

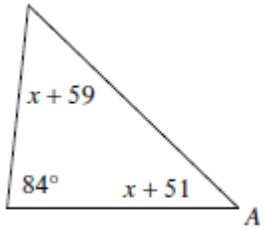
a)



b)



c)



2. If line *A* and *B* are parallel, find the measures of the numbered angles in the figures below.

Figure 1

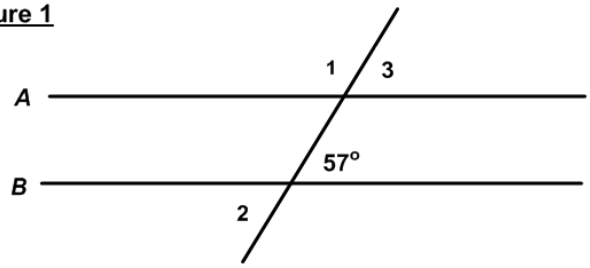
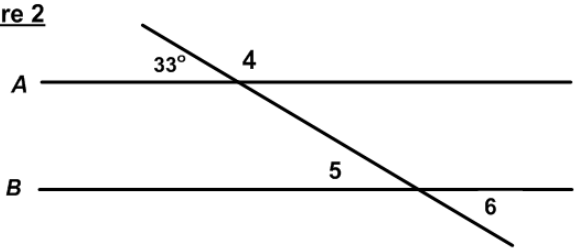
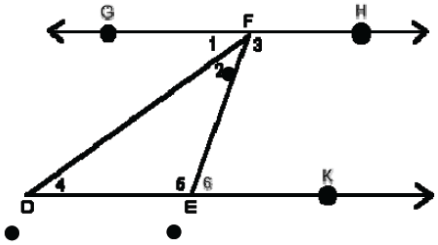


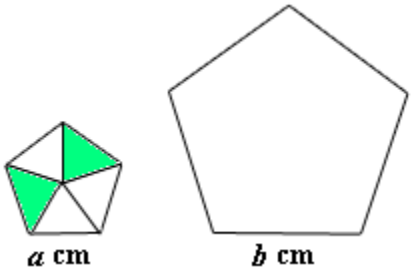
Figure 2



3. Given: GH is parallel to DK, angle 6 = 75, angle 2 = 30. Find angle 1 – 6.

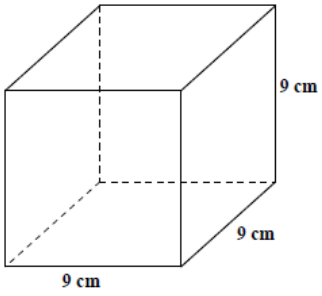


4. The figure shows two regular pentagons which are similar. If the area of the larger pentagon is 45 cm^2 then find the area of the shaded portion of the smaller pentagon. [Given a = 8 and b = 12.]

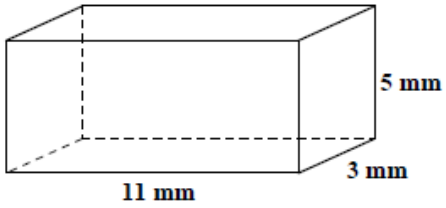


5. Find the surface area and volume of each prism.

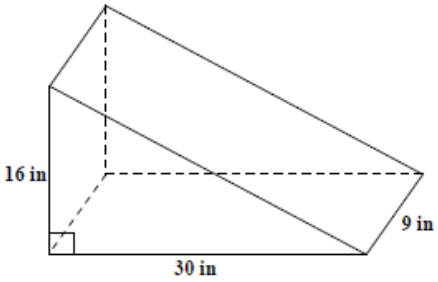
a)



b)

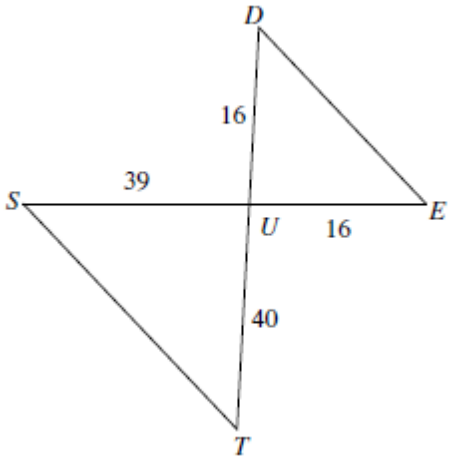


c)

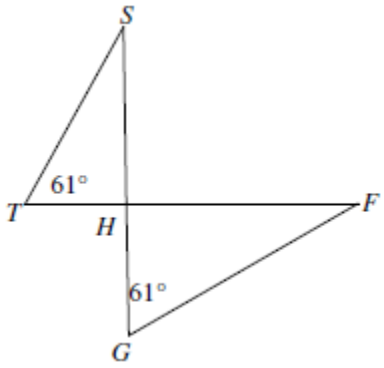


6. State if the triangles in each pair are similar. If so, state how you know they are similar and complete a similarity statement.

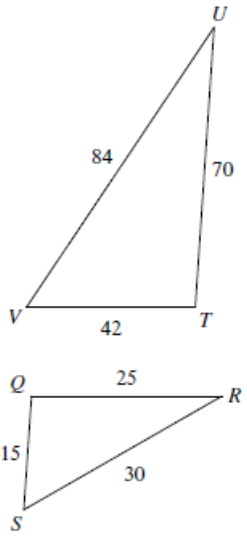
a)



b)



c)



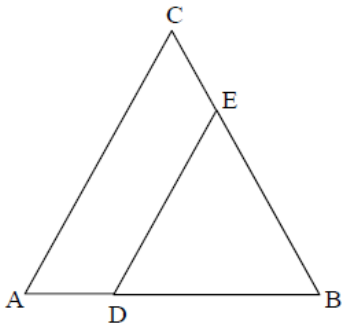
7. Find the mean, median, mode, and range of the given data set, which shows the heights (in inches) of 10 students in Mr. Brown's class.

63, 58, 62, 59, 64, 65, 65, 65, 60, and 75

8. A surveyor asked a group of people what they would like to do in their free time. The results are recorded in the table. Find the experimental probability of a person interested in reading magazines in his/her free time. How about shopping? How about not Watching TV?

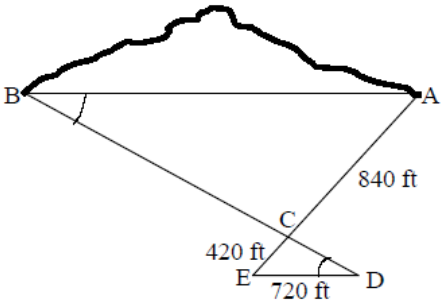
Activity	Number of people
Shopping	22
Watching T.V.	26
Reading Magazines	30
Others	6

9. Given: AB = CB = 9 cm, DB = 2/3AB and EB = 2/3CB
Prove: $\Delta ABC \sim \Delta DBE$



10. A surveyor needs to determine the distance across the base (AB) of a mountain. This surveyor can directly measure the lengths given below.
a. Is ΔEDC similar to ΔABC? Use mathematics to justify your answer.

b. What is the measure of the base of the mountain?



Note: The figure is not drawn to scale.