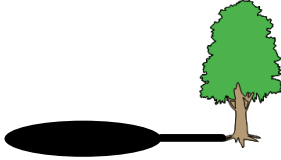


MEASURING HEIGHTS WITH SHADOW:

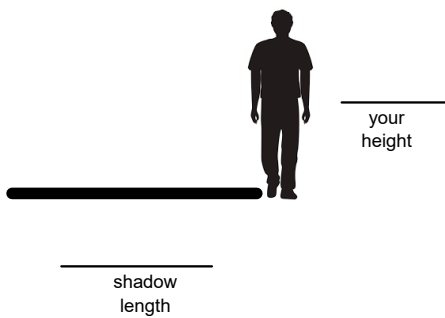
Select an object whose base is at right angles to the ground and whose height you cannot measure. _____



Measure the length of the shadow of the object: _____

Repeat this activity with two other objects.

Measure **your** height and the length of **your shadow**. Use the same units.



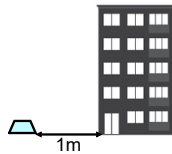
Draw similar triangles representing this situation in the space below. Label the diagram and indicate all known measurements with units.

Use your knowledge of similar triangles to solve for the height of the object.

MEASURING HEIGHTS WITH MIRROR

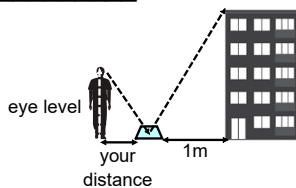
Repeat this activity with two other objects.

Select an object whose height you cannot measure. _____



Lay a small mirror horizontally on the ground 1 meter in front of the object.

Slowly walk backwards until you can just see the top of the object in the mirror. Measure **your distance** from the mirror.



Measure the distance from the **ground to your eye level**. _____

Draw similar triangles representing this situation in the space below. Label the diagram and indicate all known measurements with units.

Use your knowledge of similar triangles to solve for the height of the object.