

ESTIMATING DISTANCES

①

Your arm is about ten times longer than the distance between your eyes. Verify.

Arm length: _____ cm

Distance between eyes: _____ cm

$$\frac{\text{Arm Length}}{\text{Distance}} =$$

②

Select an object from which you want to determine the distance (or have a person stand at the distance you wish to measure.)

Estimate the width of the object (person).
_____ cm

③

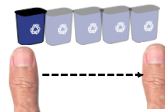
Hold one arm straight out in front of you, elbow straight, thumb pointing up.

Close one eye, and align one side of your thumb with a particular spot on the front of the object.

Without moving your head or arm, sight with the other eye. Your thumb will appear to jump sideways.

④

Approximate the number of widths of the object your thumb appeared to move.

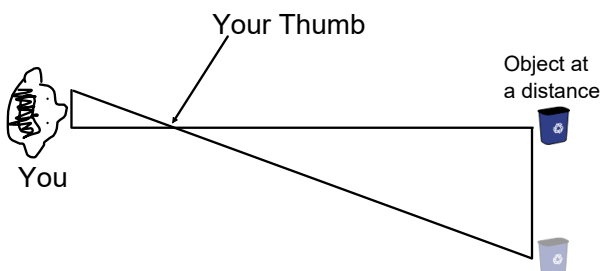


_____ widths

What is the **distance** the image moved?

⑤

Add your measurements to the diagram below.



⑥

Use your knowledge of similar triangles to determine the distance from you to the object (or person). Show your work here.