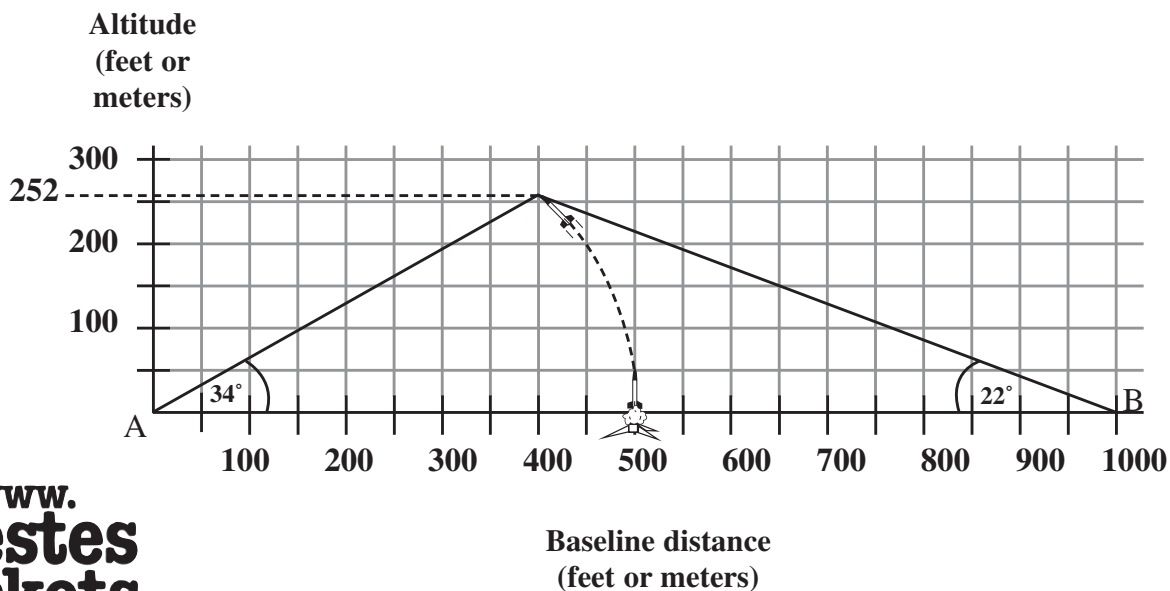
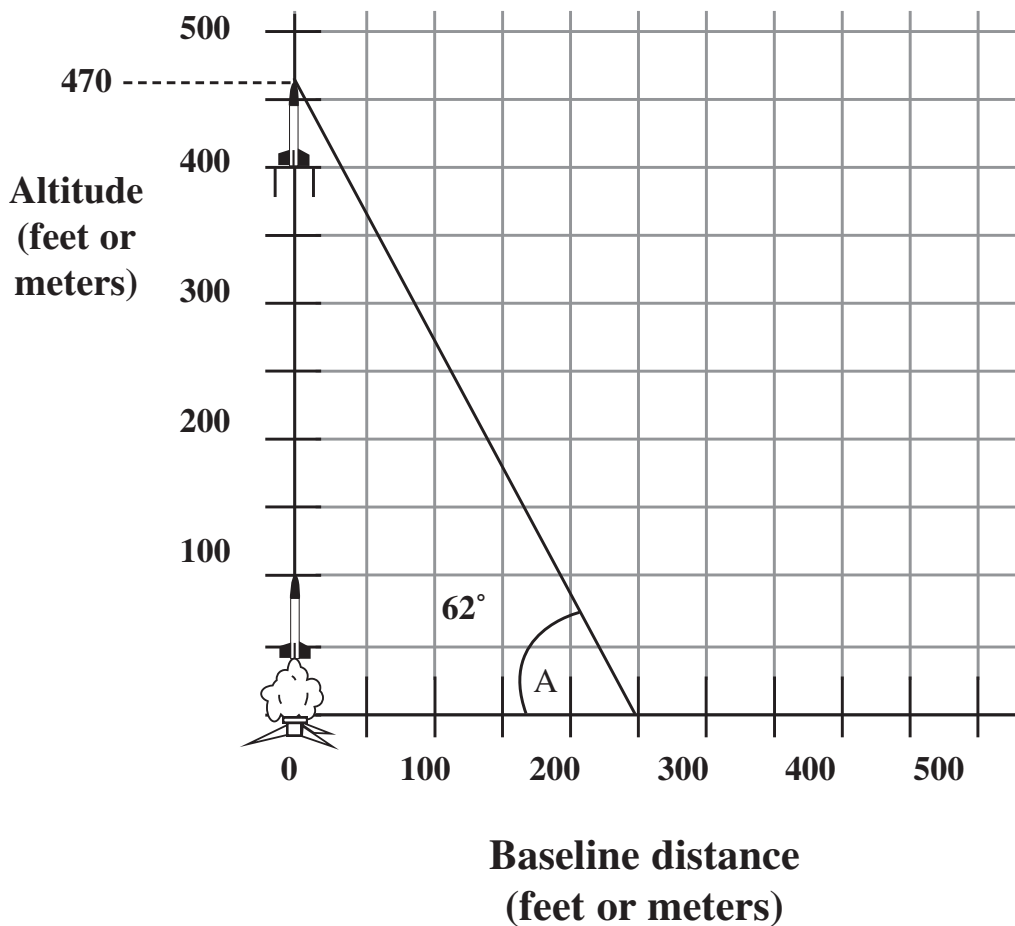


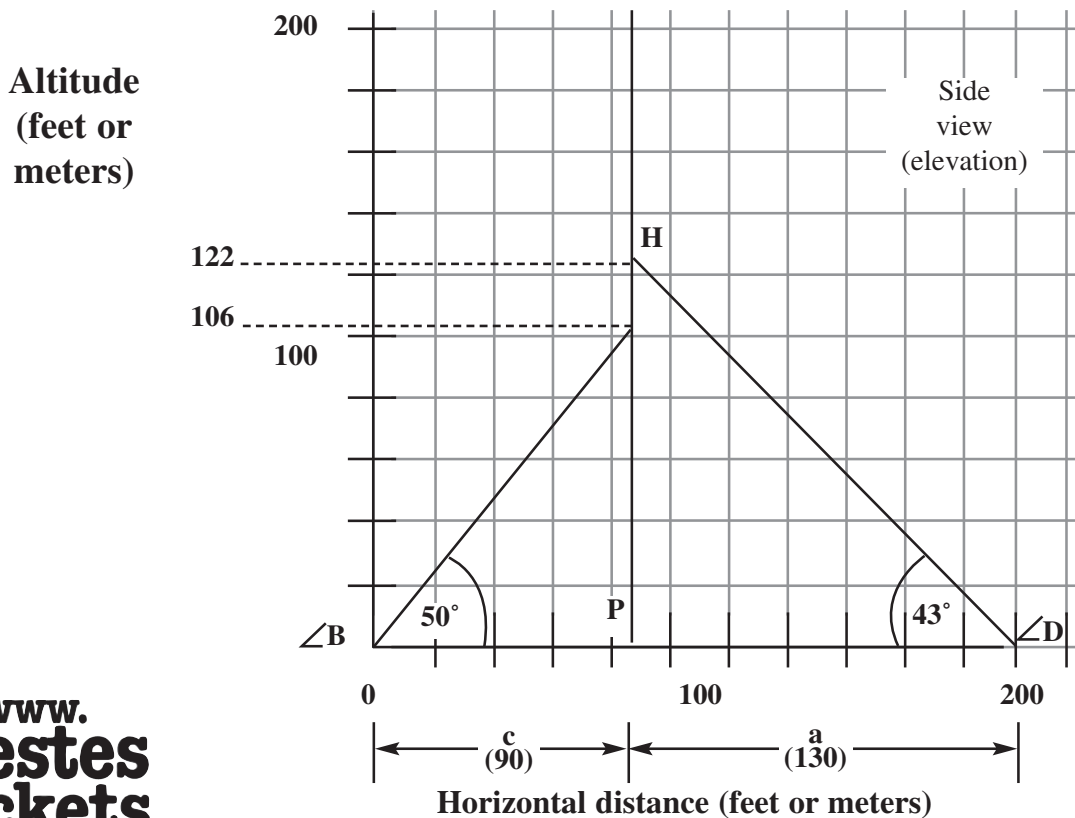
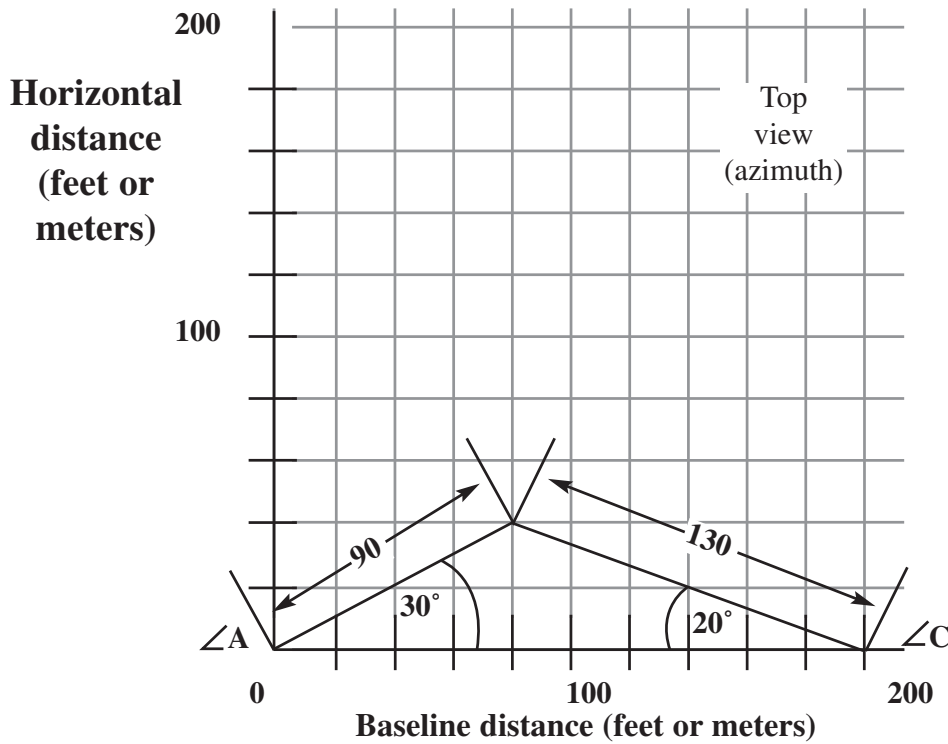


Altitude Tracking





Altitude Tracking

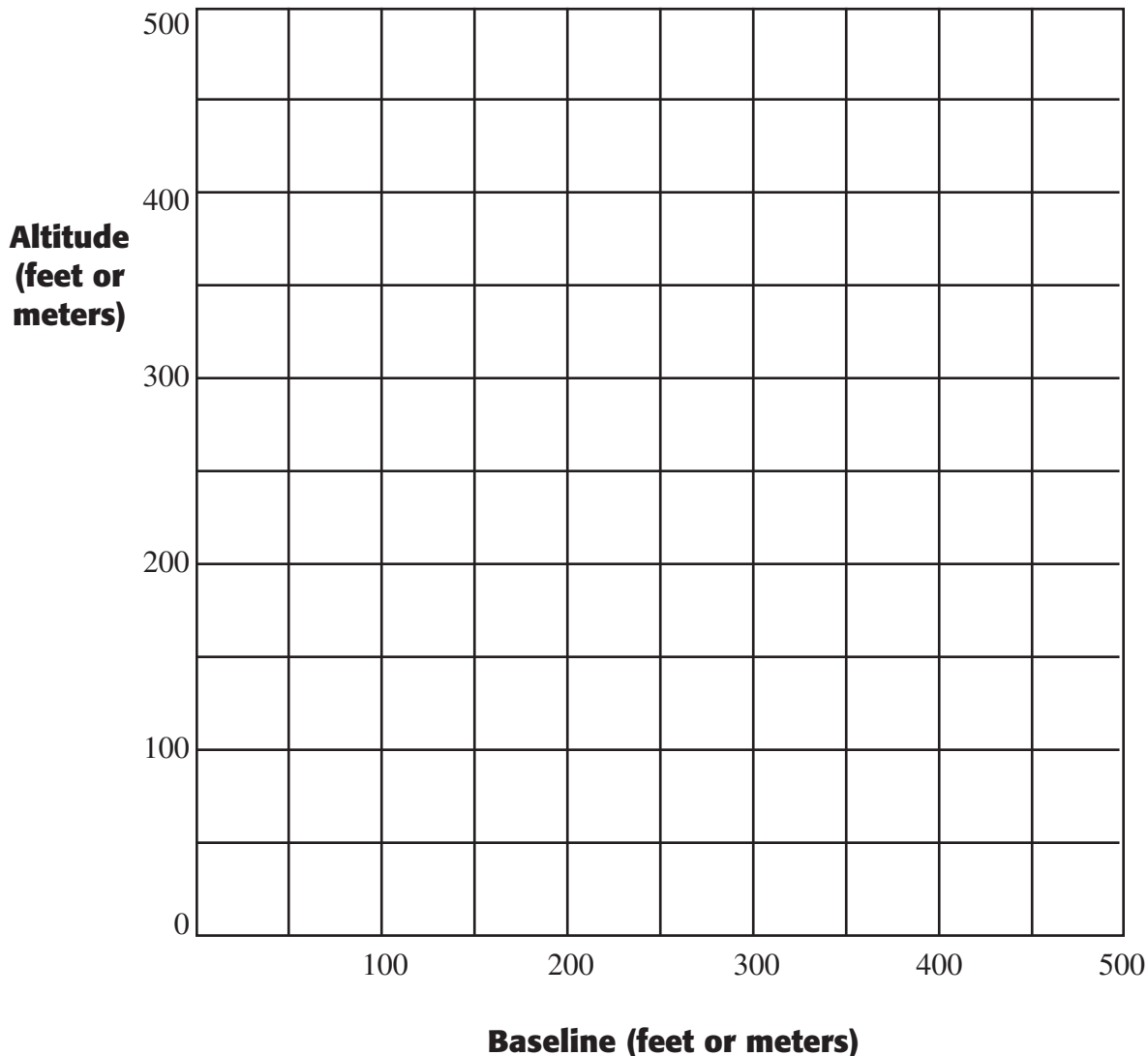




Name _____
Class _____

Date _____

GRAPHING USING ONE STATION TRACKING



- Use the horizontal axis to plot the baseline distance (distance from launcher to tracker).
- Use the vertical axis to plot the rocket's altitude. The rocket is launched at 0 on the graph paper and climbs vertically up the vertical axis.
- Mark the tracker's position on the horizontal axis and plot the elevation angle.
- Extend the angle (line of sight) until it intersects the vertical axis. The intersected point on the vertical axis is the rocket's altitude.



ROCKET LAB™

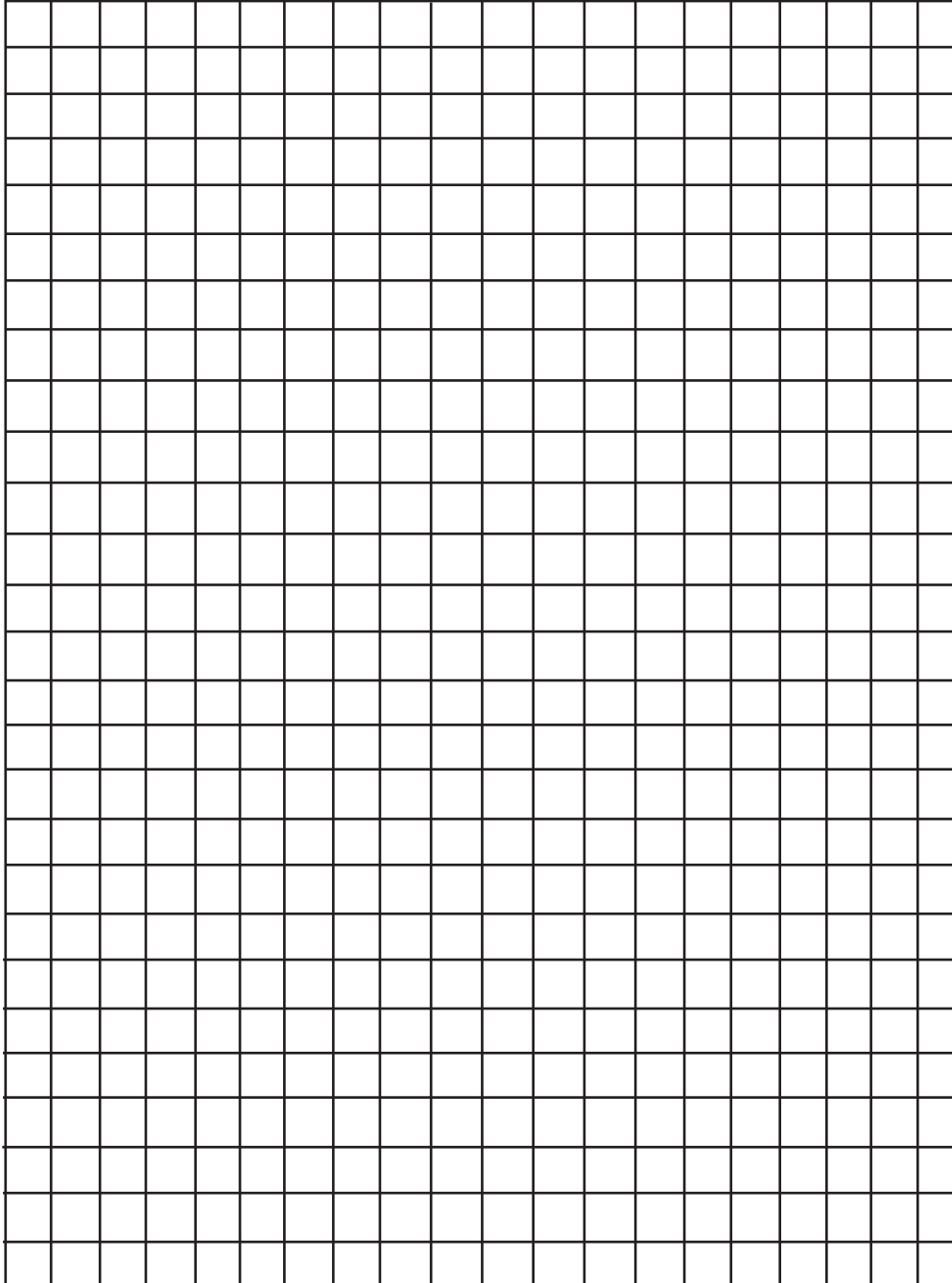
Name _____
Class _____

Date _____

GRAPHING USING TWO STATION TRACKING

Layout baseline distances (horizontal axis) and rocket altitude (vertical axis) on graph paper. Plot the elevation angles at each end of the graph, then extend them until they intersect. The point of intersection extended to the vertical axis is the rocket's altitude.

Altitude (feet or meters)



Baseline (feet or meters)



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Name _____
Class _____

Date _____

Launch Data

Student Name	Predicted Altitude	Baseline	Angular Distance	Altitrak's Alt. in Meters	Altitude (Using Angular Distance)	Altitude in Feet (Using Altitrak's Alt. in Meters)

How high did my rocket go?

1. Using Altitrak's Angle Scale (Angular Distance)
Altitude = Angle Tangent X Baseline Distance

2. Using Altitrak's Altitude in Meters Scale
Convert meters to feet
1 meter = 3.28 feet
Feet = Meters X 3.28 ft.



Name _____
Class _____

Date _____

Longest Flight Launch Data

Student Name	Flight Number	Engine Type	Predicted Flight Time	Actual Flight Time	Class Rank	Longest Flight Winner

NOTES:



Name _____
Class _____

Date _____

Practice Determining Altitude

Flagpole

Angular distance = _____

Tangent of angular distance = _____

Baseline = _____

H = _____

Tall Tree

Angular distance = _____

Tangent of angular distance = _____

Baseline = _____

H = _____

Basketball backboard

Angular distance = _____

Tangent of angular distance = _____

Baseline = _____

H = _____

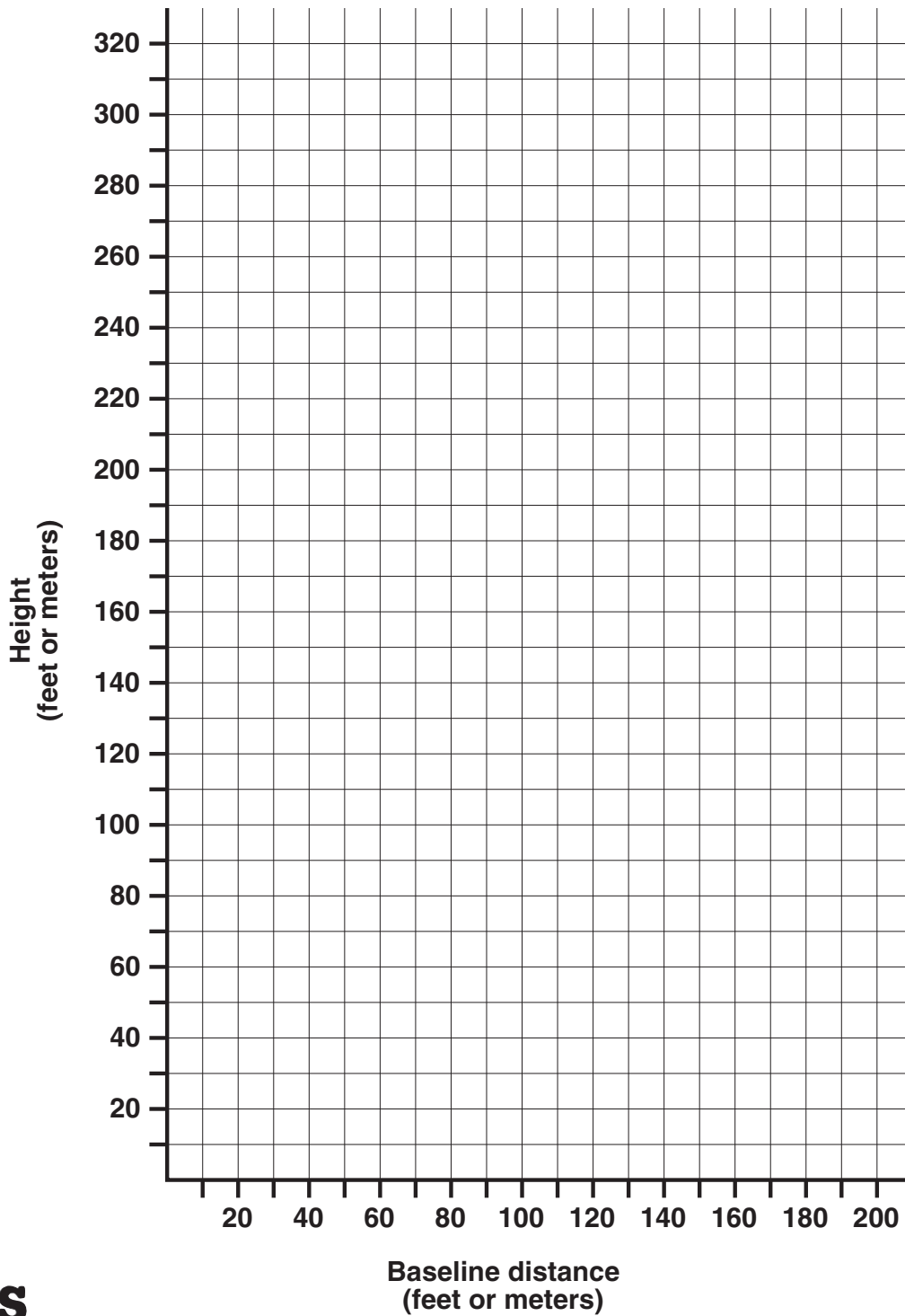
Make up problems for your partner to solve.



Name _____
Class _____

Date _____

Graphically Determining Height





Name _____
Class _____

Date _____

Graphically Determining Altitude

