

Assignment – Trigonometry

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You will need a clinometer and measuring tape. Make ALL measurements in cm.

Activity #1

- a) Stand 200cm directly in front of the chalk board; use the clinometer to measure the angle of elevation to the top of the chalk board.
- b) Measure the distance from the floor to your eye level.
- c) Draw a diagram of the set-up and record your measurements on it.
- d) Use trigonometry to determine the height of the top of the chalk board.
- e) Measure the distance to the top of the chalk board. How accurate are your calculations?

Activity #2

- a) Standing 100 cm in front of your desk use your clinometer to determine the angle of depression to the top, front edge (edge closest to you) of your desk.
- b) Measure the height from the floor to the top of your desk.
- c) Draw a diagram of the set-up and record your measurements on it.
- d) Use trigonometry to determine your height (only to eye level).
- e) Measure the distance from the floor to your eye level. How accurate are your calculations?

Activity #3

a) Stand back a distance from one of the windows. Measure the distance you are from the window.

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b) Measure the distance from the floor to your eye level.

c) Measure the distance from the floor to the top of the window.

d) Draw a diagram of the set-up and record your measurements on it.

e) Use trigonometry to determine the angle of elevation from your eye to the top of the window.

f) Use your clinometer to see how accurate your calculations are.

Activity #4

a) Sitting on a desk, 300cm directly in front of the crucifix, use your clinometer to measure the angle of elevation to the top of the crucifix.

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b) Measure the distance from the floor to your eye level.

c) Draw a diagram of the set-up and record your measurements on it.

d) Use trigonometry to determine the height from the floor to the top of the crucifix. Show calculations here:

e) Measure the actual height from the floor to the top of the crucifix. How accurate are your calculations?