



كلية الهندسة - جامعة القاهرة
شعبة هندسة الجيوماتكس
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Homework Assignment No. 1
Surveying Definition & Units

Part A- Mark the correct answer for the following:

1. Which of the following is not related for surveying definition:

- Surveying is the determination of the relative spatial location of points on or near to the surface of the earth
- Measuring slope and horizontal and vertical distances between objects.
- Establishing points location by predetermined angle and distance
- Evaluating the location and value of a parcel of land.

2. The primary purpose of engineering surveying on a construction site is to

- Produce maps or plans of the site
- Measure and cost volumes of material moved around the site
- Carry out as-built surveys for a project
- Ensure that the project is built with the correct dimensions and in the correct location
- Monitor for structural movement

3. When working on surveying projects, it is best to

- Hurry to complete work to avoid making mistakes
- Always check work where possible
- Only measure values once to avoid confusion in bookings
- Have a partner with you who has done surveying before
- Avoid all of these

4. The three basic surveying measurements are:

- Levelling, taping and total stations
- Height, distance and angle
- Tapes, EDM and levels
- none of these

Part B- Answer the followings:

1. A triangle ABC with angle A is $56^{\circ} 25' 20''$, B is $75^{\circ} 32' 48''$, and C is $48^{\circ} 01' 52''$. Convert these angles to grade system, and then find their sum.

2. The figure to the right shows a surveying procedure for determining a horizontal distance across a lake indirectly. If the measured horizontal distances were; $AB = 332.15$ m and $AC = 272.28$ m, the horizontal angle BAC is 93.186° . Compute the distance BC in in meters. Also, if the area of the lake was estimated at 4 feddans 19 kirats 4 sahms, determine the area of the lake in sq.m.

