

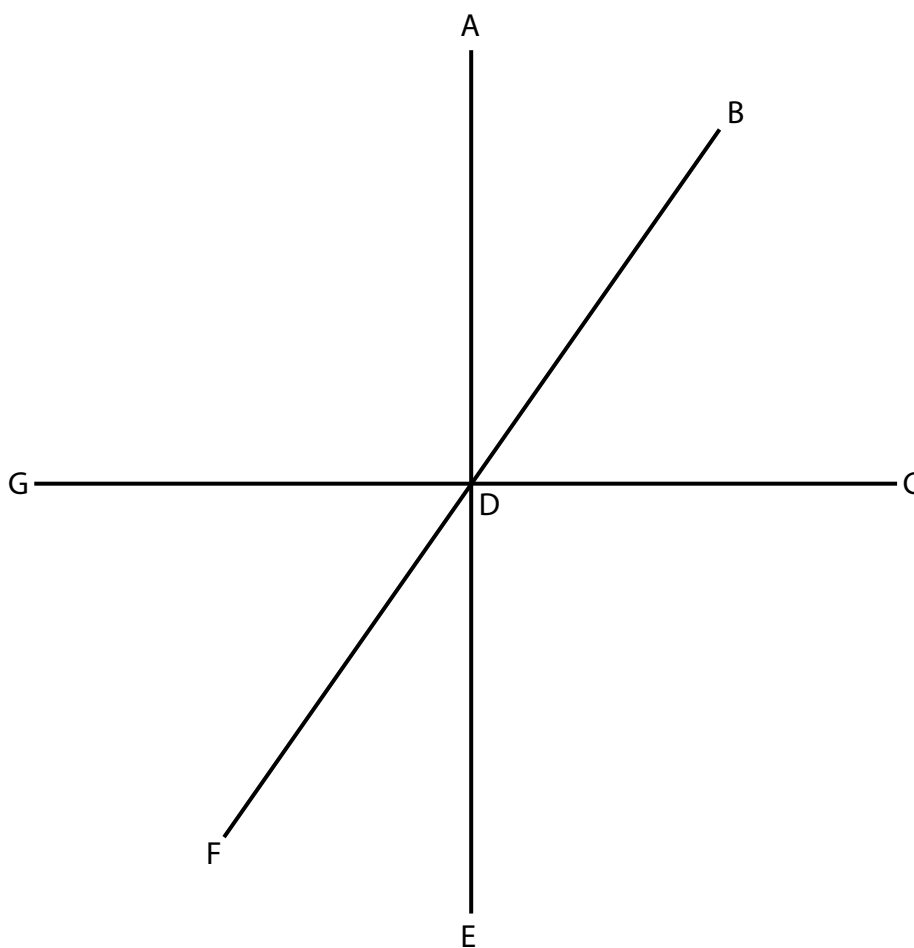
# Diagnostic Test

## Unit 13 Simple Geometry

**Purpose:** to help the student and instructor determine what, if any, sections of this unit the student needs to study.

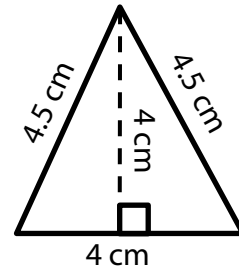
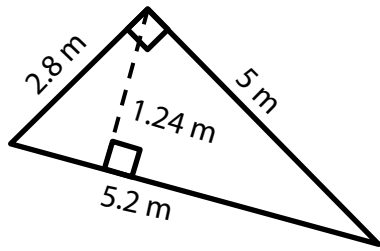
*Do all the math work neatly on the test itself. The instructor will pay as much attention to the work as the answers.*

*Use the drawing below for problems 1, 2, 3 and 4.*



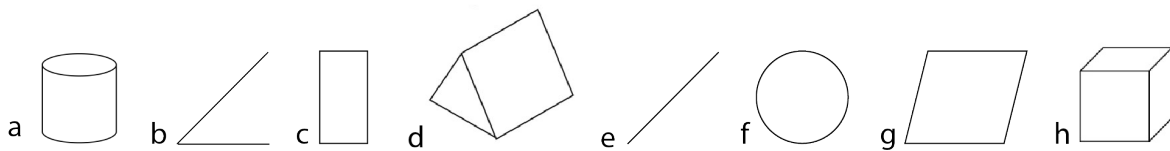
1. Use a protractor and measure  $\angle ADB$ .
2. Use a protractor and measure  $\angle GDB$ .
3. Which angle is a  $180^\circ$  angle?

- Name all the right angles in the drawing.
- Below are two triangles. Calculate the perimeter of the right triangle.



Define the following words relating to circles.

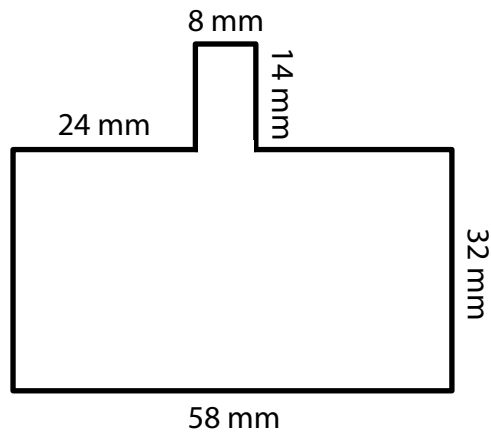
- diameter
- radius
- circumference
- pi ( $\pi$ )
- A circle has a radius of 11.24 cm. Calculate the circumference of the circle.
- Below each shape, write down whether that shape has 1 dimension, 2 dimensions or 3 dimensions.



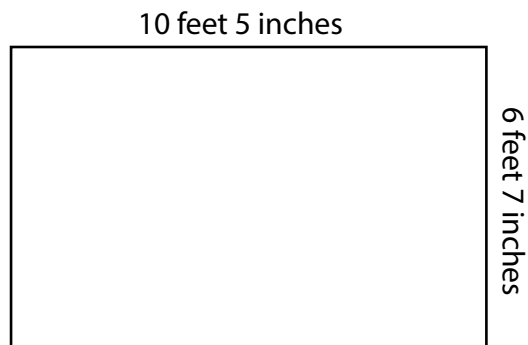
- What are perpendicular lines? Draw a sketch showing perpendicular lines.
- What are parallel lines? Draw a sketch showing parallel lines.
- What does “9<sup>2</sup>” mean? What number is it equal to?
- What does “5 to the 4<sup>th</sup> power” mean? What number is it equal to?
- What does “8 cubed” mean? What number is it equal to?

17. What does “14 squared” mean? What number is it equal to?

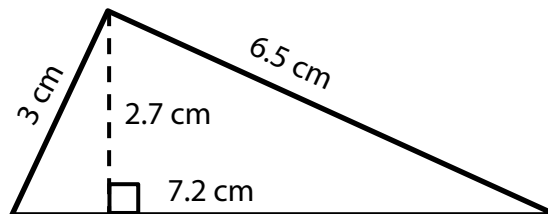
18. For the shape below, calculate the area (including the units for the area).



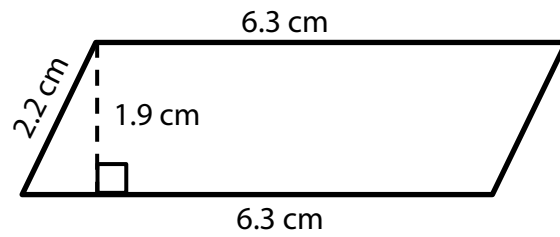
19. For the shape below, calculate the area (including the units of the area).



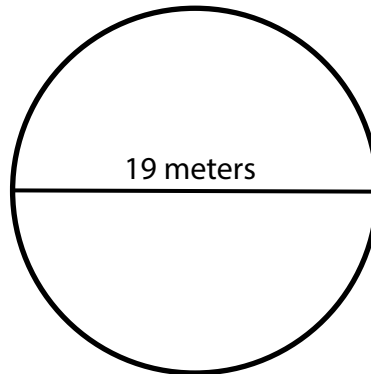
20. Find the area of the triangle below.



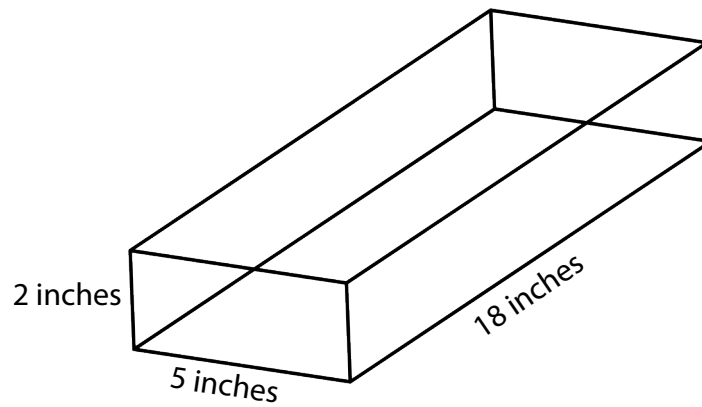
21. Find the area of the shape below.



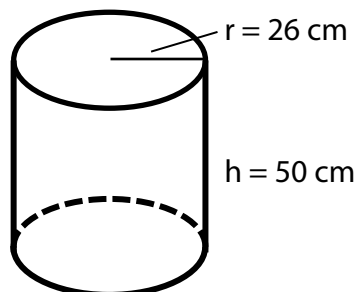
22. Find the area of the circle below.



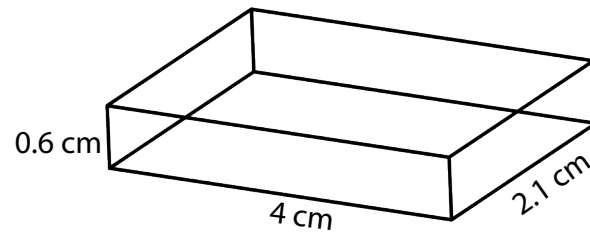
23. Calculate the surface area (including the units) of the shape below.



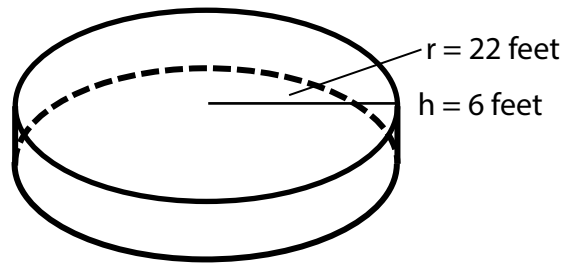
24. Calculate the surface area (including the units) of the shape below.



25. Find the volume (including the units) of the shape below.



26. Find the volume (including the units) of the shape below.



27. Find the length of the missing side of the triangle below. You may use a calculator.

