Name: _____ Date: _____

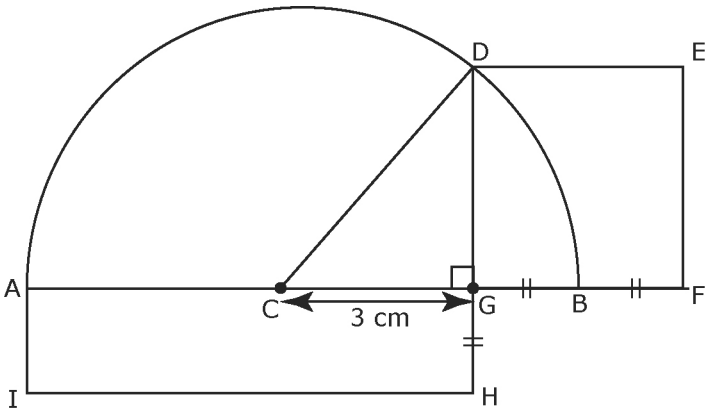
Chapter 3 Gifted and Enrichment

1. In construction, the lengths of the sides of triangles in structures can be measured to test for perpendicular trueness. Explain why this would work.

2. A 2-m tall man is standing in the shadow of a 20-m tall pole so that the end of his shadow is the end of the pole's shadow. The man's shadow is 75% as long as he is tall. How far away from the pole is the man standing? How far is the top of the pole from the end of its and the man's shadow?

3. In a triangle, the longest side is 1.25 times as long as the middle-length side and the shortest side is 0.75 times as long as the middle-length side. Show that the triangle is a right triangle.

4. In the following diagram, the circumference of the circle (only semi-circle is shown) is 10π cm and AB is the diameter through centre C.



Use your knowledge of the Pythagorean relation to show that square DEFG has the same area as rectangle AGHI. How could you show this without using the Pythagorean relation?