

PERIMETER OF A CIRCLE

SKILLS QUESTIONS

Q1. Find the circumference of a circle with a diameter of:

- (a) 3 cm (b) 5 m (c) 2.7 m (d) 18 km (e) 4.9 mm
(f) $16\frac{1}{4}$ cm (g) $3\frac{1}{2}$ m (h) $3\frac{1}{4}$ cm (i) $4\frac{2}{3}$ m (j) $5\frac{1}{8}$ cm

Q2. Find the circumference of a circle with a radius of:

- (a) 5 cm (b) 7 m (c) 19 m (d) 28 km (e) 4.9 mm
(f) $6\frac{1}{4}$ m (g) $3\frac{7}{8}$ m (h) $8\frac{3}{4}$ cm (i) $5\frac{2}{3}$ m (j) $6\frac{5}{8}$ cm



Q3. (a) If the diameter of a bicycle tyre is 70 cm, what is its circumference?

(b) How far would a cyclist travel in 300 turns of the wheel?

Q4. In the Tour de France race, cyclists travel 3200 km. Refer to your answer to Q3 (a) to work out how many turns of the wheel this is.

Q5. (a) A circular velodrome (cycling race track) has a radius of 150 metres, what is the length of one lap?

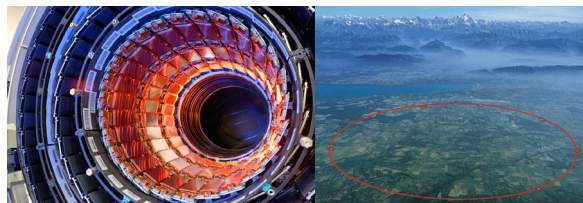
(b) How long is a race of 5 laps?

Q6. The wheel of a bus has a diameter of 90 cm.

(a) What is the radius?

(b) What is the circumference?

(c) If the wheels of the bus go around and around 500 times, how far does it travel?



Q7. In Switzerland at the Large Hadron Collider, particle physicists collide particles at enormous speeds to prove the existence of the Higgs Boson, the particle thought to be responsible for the mass of all objects in the universe. The circumference of the collider is 27 km. What is its radius?

ANSWERS

- Q1. (a) 9.4cm
(b) 15.7m
(c) 8.48m
(d) 56.52km
(e) 15.39mm
(f) 51.03cm
(g) 10.99m
(h) 10.21cm
(i) 14.65m
(j) 16.09cm

- Q2. (a) 31.4cm
(b) 43.96m
(c) 119.32m
(d) 175.84km
(e) 30.77mm
(f) 39.25m
(g) 24.34m
(h) 54.95cm
(i) 35.59m
(j) 41.61cm

- Q3. (a) 219.8cm
(b) 659.4m

Q4. 4852.9 turns

- Q5. (a) 942m
(b) 4710m

- Q6. (a) 45cm
(b) 282.6cm
(c) 1413m

Q7. 4299.36m