1. Calculate the perimeter and area of each shape.

1. b)

3 cm

10 cm

4 cm

12 cm

5 cm

c)

64 m

100 m

2. Calculate the area of the shaded region.

a) b)

6.8 m

6.2 cm

9.8 cm

c) d)

4.8 cm

5 cm

# Application

3. The field inside a 400 m running track is to be seeded. Each straight portion of the track is 100 m. Each curved part of the track is a semicircle. One 1.5 kg bag of grass seed will seed an area of 80 m2.

1. What is the length of each curved part of the track?
2. Calculate the width of the field.
3. Calculate the area of the field.
4. Determine the number of bags of seed required.
5. One 1.5 kg bag of grass seed costs $12.64. How much does it cost to seed the field?

## Trickier…

4. A dog is tied to a 2-m leash at ground level on the side of a building. The leash is attached 1 m from the corner of the building.

1. Sketch the region within the dog’s reach and label dimensions.
2. Determine the area of this region, to the nearest square metre.
3. Calculate the area of the shaded region

4.8 m

1. Calculate the area of the shaded part of each figure.
2. b)

r

R

2r

2r

Answers

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Perimeter (cm) | Area (cm2) |
|  | a | 30 | 30 |
| b | 30 | 40 |
| c | 401 | 9617 |

|  |  |
| --- | --- |
| 2. a) 181 cm2  b) 9.9 m2  c) 36 cm2  d) 258 cm2  3. a) 100 m  b) 64 m  c) 9617 m2  d) 121 bags  e) $1529.44 | 4. b) 7 m2  5. 6.5 m2  6. a) A = πR2 - πr2  b) A = 4r2 - πr2 |