# Maths skills – M4.1 Calculate the circumference, surface areas and volumes of regular shapes

### Quiz

Calculate the following correct to 3 significant figures.

**1.** Circumference of circle

Radius =

| a) 0.50 µm |  |
| --- | --- |
| b) 3.00 mm |  |

**2.** Area of circle

Radius =

| a) 0.50 µm |  |
| --- | --- |
| b) 3.00 mm |  |

**3.** Surface area of cuboid

| a) | b = 4.00 cm | l = 6.00 cm | h = 1.00 cm |  |
| --- | --- | --- | --- | --- |
| b) | b = 3.00 mm | l = 4.00 mm | h = 3.00 mm |  |

**4.** Volume of cuboid

| a) | b = 4.00 cm | l = 6.00 cm | h = 1.00 cm |  |
| --- | --- | --- | --- | --- |
| b) | b = 3.00 mm | l = 4.00 mm | h = 3.00 mm |  |

**5.** Surface area of cylinder

| a) | r = 0.500 µm | l = 4.00 µm |  |
| --- | --- | --- | --- |
| b) | r = 3.00 mm | l = 10.0 mm |  |

**6.** Volume of cylinder

| a) | r = 0.500 µm | l = 4.00 µm |  |
| --- | --- | --- | --- |
| b) | r = 3.00 mm | l = 10.0 mm |  |

**7.** Surface area of sphere

| a) r = 0.500 µm |  |
| --- | --- |
| b) r = 3.00 mm |  |

**8.** Volume of sphere

| a) r = 0.50 µm |  |
| --- | --- |
| b) r = 3.00 mm |  |

**9.** Calculate the surface area to volume ratio of a mitochondrion that is approximately cylindrical in shape and has a length of 7.0 µm and a radius of 0.50 µm.

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