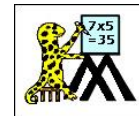# PERIMETER OF A SECTOR SHEET 2

*Use the radius and angle measurement to find the perimeter of these sectors. Give your answers to 2 decimal places.*

|   |   | WORKING OUT | AREA |
|---|---|---|---|
| 1) | 12 cm 120° | | |
| 2) | 6 ½ in 64° | | |
| 3) | 38 mm 135° | | |
| 4) | 112° 3.2 m | | |
| 5) | 5 ¾ in 234° | | |
| 6) | 325° 18 cm | | |

# PERIMETER OF A SECTOR SHEET 2 ANSWERS

*Use the radius and angle measurement to find the perimeter of these sectors. Give your answers to 2 decimal places.*

| | | WORKING OUT | PERIMETER |
|---|---|---|---|
| 1) | 12 cm, 120° | P = 2r + L <br> L = (Θ/180) · π · r = (120/180) · π · 12 <br> = (1440/180) · π = 8π = 25.133 (to 3dp) <br> P = 2 x 12 + 25.133 = 24 + 25.133 = 49.133 (to 3dp) | 49.13 cm to 2 decimal places |
| 2) | 6 ½ in, 64° | P = 2r + L <br> L = (Θ/180) · π · r = (64/180) · π · 6 ½ <br> = (416/180) · π = (104/45) · π = 7.261 (to 3dp) <br> P = 2 x 6 ½ + 7.261 = 13 + 7.261 = 20.261 (to 3dp) | 20.26 in. to 2 decimal places |
| 3) | 38 mm, 135° | P = 2r + L <br> L = (Θ/180) · π · r = (135/180) · π · 38 <br> = (5130/180) · π = (57/2) · π = 89.535 (to 3dp) <br> P = 2 x 38 + 89.535 = 76 + 89.535 <br> = 165.535 (to 3dp) | 165.54 mm to 2 decimal places |
| 4) | 112°, 3.2 m | P = 2r + L <br> L = (Θ/180) · π · r = (112/180) · π · 3.2 <br> = (448/225) · π = 6.255 (to 3dp) <br> P = 2 x 3.2 + 6.255 = 6.4 + 6.255 = 12.655 (to 3dp) | 12.66 m to 2 decimal places |
| 5) | 5 ¾ in, 234° | P = 2r + L <br> L = (Θ/180) · π · r = (234/180) · π · 5 ¾ <br> = (234/180) · (23/4) · π = (299/40) · π <br> = 23.483 (to 3dp) <br> P = 2 x 5 ¾ + 23.483 = 34.983 (to 3dp) | 34.98 in. to 2 decimal places |
| 6) | 325°, 18 cm | P = 2r + L <br> r = 18 ÷ 2 = 9 cm <br> L = (Θ/180) · π · r = (325/180) · π · 9 <br> = (65/4) · π = 51.051 (to 3dp) <br> P = 2 x 9 + 51.051 = 18 + 51.051 = 69.051 (to 3dp) | 69.05 cm to 2 decimal places |