Topic: Circumference and Area

Topic/Skill	Definition/Tips	Example
1. Circle	A circle is the locus of all points equidistant from a central point.	•
2. Parts of a Circle	 Radius – the distance from the centre of a circle to the edge Diameter – the total distance across the width of a circle through the centre. Circumference – the total distance around the outside of a circle Chord – a straight line whose end points lie on a circle Tangent – a straight line which touches a circle at exactly one point Arc – a part of the circumference of a circle Sector – the region of a circle enclosed by two radii and their intercepted arc Segment – the region bounded by a chord and the arc created by the chord 	Parts of a Circle Radius Diameter Circumference Chord Arc Tangent Segment Sector
3. Area of a Circle	$A = \pi r^2$ which means 'pi x radius squared'.	If the radius was 5cm, then: $A = \pi \times 5^2 = 78.5 cm^2$
4. Circumference of a Circle	$C = \pi d$ which means 'pi x diameter'	If the radius was 5cm, then: $C = \pi \times 10 = 31.4cm$
5. π ('pi')	Pi is the circumference of a circle divided by the diameter. $\pi \approx 3.14$	S-WAL P DISTR IN PATLON Poly Ran# DRG DISTR DRG DISTR DRG DISTR
6. Arc Length of a Sector	The arc length is part of the circumference. Take the angle given as a fraction over 360 ° and multiply by the circumference .	Arc Length = $\frac{115}{360} \times \pi \times 8 = 8.03cm$
7. Area of a Sector	The area of a sector is part of the total area. Take the angle given as a fraction over 360° and multiply by the area .	Area = $\frac{115}{360} \times \pi \times 4^2 = 16.1 cm^2$

8. Surface	Curved Surface Area = πdh or $2\pi rh$	
Area of a		
Cylinder	Total SA = $2\pi r^2 + \pi dh$ or $2\pi r^2 + 2\pi rh$	5
		2
		$Total SA = 2\pi(2)^2 + \pi(4)(5) = 28\pi$
9. Surface	Curved Surface Area = πrl	//\
Area of a Cone	where $l = slant \ height$	5m
	Total SA = $\pi r l + \pi r^2$	
	You may need to use Pythagoras' Theorem	
	to find the slant height	$Total SA = \pi(3)(5) + \pi(3)^2 = 24\pi$
10. Surface	$SA = 4\pi r^2$	Find the surface area of a sphere with
Area of a		radius 3cm.
Sphere	Look out for hemispheres – halve the SA of	
	a sphere and add on a circle (πr^2)	$SA = 4\pi(3)^2 = 36\pi cm^2$