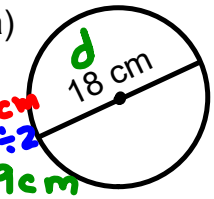
Warm Up Grade 7

Dec. 13 ,2022

1) Find the area for each

a)



d = 18cm

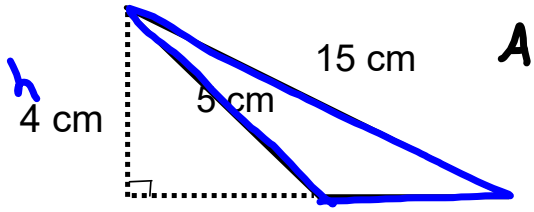
÷2

r = 9cm

$A_{\circ} = \pi \times r \times r$

$= 3.14 \times 9cm \times 9cm$

$= 254.34cm^2$



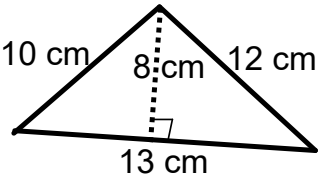
$A = \frac{b \times h}{2}$

$= \frac{(7cm) \times (4cm)}{2}$

$= \frac{28cm^2}{2}$

$A_{\triangle} = 14cm^2$

b)



$A_{\triangle} = \frac{b \times h}{2}$

$= \frac{13cm \times 8cm}{2}$

$= \frac{104cm^2}{2}$

$A_{\triangle} = 52cm^2$

Homework Solutions

Homework Solutions Page 151 # 1(a,b), 2(b,d), 3(a,b,c), 4or 5

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1. a) $r = 2\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 2 \times 2$

$= 12.56\text{cm}^2$

$\approx 3 \times 2 \times 2 = 12$

b) $r = 7\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 7 \times 7$

$= 153.86\text{cm}^2$

$\approx 3 \times 7 \times 7$ or $3 \times 50 = 150$

c) $d = 14$,

so $r = 7\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 7 \times 7$

$= 153.86\text{cm}^2$

d) $d = 30\text{cm}$

so $r = 15\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 15 \times 15$

$= 706.5\text{cm}^2$

$\approx 3 \times 225$

675

2. a) $r = 3\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 3 \times 3$

$= 28.26\text{cm}^2$

$\approx 3 \times 3 \times 3 = 27$

b) $d = 12\text{cm}$

$r = 6\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 6 \times 6$

$= 113.04\text{cm}^2$

$\approx 3 \times 6 \times 6 = 108$

c) $r = 9\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 9 \times 9$

$= 254.34\text{cm}^2$

$\approx 3 \times 9 \times 9 = 248$

d) $d = 24\text{cm}$

$r = 12\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 12 \times 12$

$= 452.16\text{cm}^2$

$\approx 3 \times 12 \times 12$

$\approx 3 \times 150$

450

3a) Double the radius, and the area becomes 4 times as large (quadruple)

$r = 1$ $A \approx 3. \times 1 \times 1$

$= 3.$

$r = 2$ $A \approx 3. \times 2 \times 2$

$= 12$

b) Look at 2a) and c)

Triple the radius, and the area will be 9 times as large.

c) $r = 4$ $A \approx 3 \times 4 \times 4$

48

Quadruple the radius and the area will be sixteen times as large

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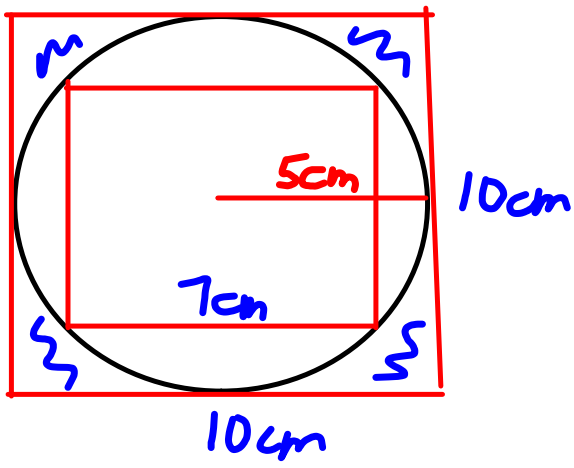
4.



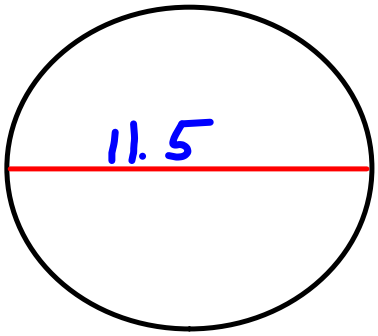
Area of small square $= 7 \times 7$
$= 49 cm^2$

Area of Large square $= 10 \times 10$
$= 100 cm$

So the area of the circle is between 49 and 100
$\approx 75 cm^2$

b) $A = \pi \times r \times r$
$= 3.14 \times 5 \times 5$
$= 78.5 cm^2$

5a) Diameter = 11.5cm



$r = \frac{11.5}{2}$

$= 5.75\text{cm}$

$A = \pi \times r \times r$

$= 3.14 \times 5.75 \times 5.75$

$= 103.8\text{cm}^2$ or 104cm^2

b) $D = 4.5$

$r = \frac{4.5}{2}$

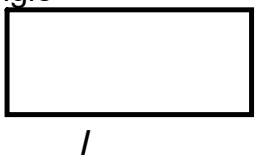
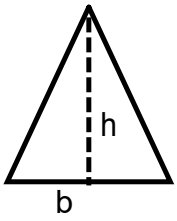
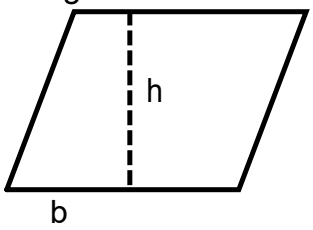
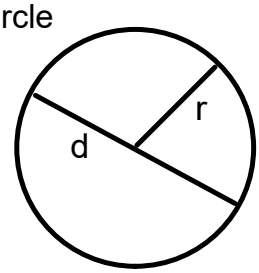
$= 2.25$

$A = \pi \times r \times r$

$= 3.14 \times 2.25 \times 2.25$

$= 15.89\text{cm}^2$ or 16cm^2

Grade 7 - Formula Sheet

	main formulas	rearranged formulas	
Rectangle 	Area = *l* x w	w = $\frac{\text{Area}}{l}$	l = $\frac{\text{Area}}{w}$
Triangle 	Area = $\frac{b \times h}{2}$	b = $\frac{2\text{xArea}}{h}$	h = $\frac{2\text{xArea}}{b}$
Parallelogram 	Area = b x h	b = $\frac{\text{Area}}{h}$	h = $\frac{\text{Area}}{b}$
Circle 	Circumference = π x d Circumference = $2\pi r$ Area = π x r x r	d = $\frac{\text{circumference}}{\pi}$	

d= 2r r = d÷ 2

Class / Homework

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#2, #3, #4,#5, #9,#10,#11, #13,#14

Test Tomorrow

???

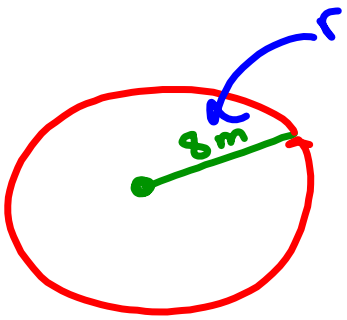
Review for Test

Know the terms throughout the unit, such as:
Circumference, radius (radii) , diameter, parallelogram, triangle, circle,pi,sector, congruent.....

Know the formulas:
Circumference
Perimeter
Area of : Circle, Triangle, Parallelogram, Rectangle

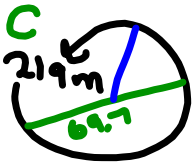
Know the relationships between:
Diameter and Radius
Area of a Triangle and Area of a Parallelogram(Rectangle)

Be able to draw a circle, using a compass, with a given diameter or radius



$A_o = \pi \times r \times r$

$C = 2\pi r$

4) 

$r = ?$

$d = \frac{C}{\pi}$ $\Rightarrow \div 2$ to get radius

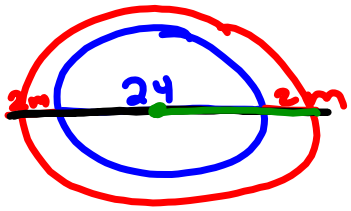
$\frac{219m}{3.14}$

$d = 69.7m$

$\downarrow \div 2$

$r = 34.85.m$

5)



a) $C = \pi d$
$= 3.14 \times 24$
$= 75.6\ m^2$

b) $r_{outside}$
$12 + 2 = 14$
$d = 28$

c) $C = \pi d$
$= 3.14 \times 28$
$= 87.92\ m^2$

9) $A_\Delta = \frac{b \times h}{2}$

$12cm^2 = \frac{(?)}{2}$ ← Top has to be $24cm^2$

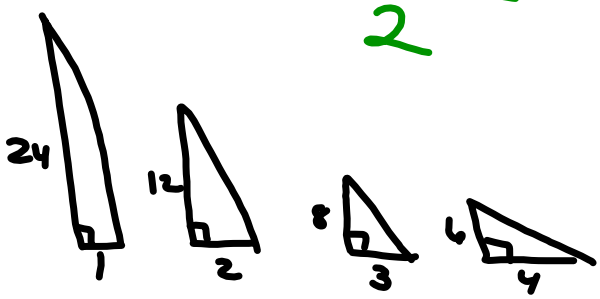
$b \times h$

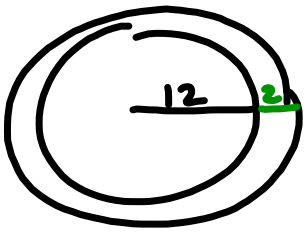
1×24

2×12

3×8

4×6





$r = 12 + 2$

$14\ m^2$