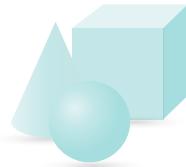


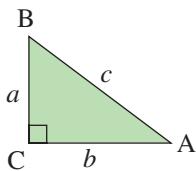
# Graduation Numeracy Reference Pages



## GEOMETRY

### Pythagorean Theorem

$$c^2 = a^2 + b^2$$

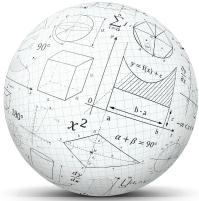


Geometric Figure	Perimeter	Area
Rectangle	$P = 2l + 2w$ <b>or</b> $P = 2(l + w)$	$A = lw$
Triangle	$P = a + b + c$	$A = \frac{bh}{2}$
Circle	$C = \pi d$ <b>or</b> $C = 2\pi r$	$A = \pi r^2$

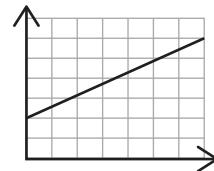
### KEY LEGEND

$l$  = length  
 $w$  = width  
 $b$  = base  
 $h$  = height  
 $s$  = slant height  
 $r$  = radius  
 $d$  = diameter  
 $P$  = perimeter  
 $C$  = circumference  
 $A$  = area  
 $SA$  = surface area  
 $V$  = volume

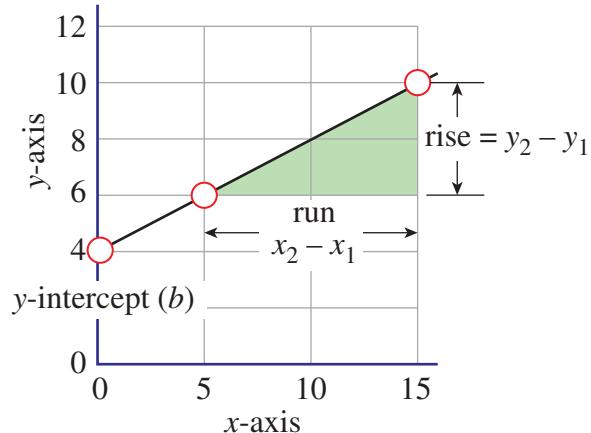
Geometric Solid	Surface Area	Volume
Cylinder	$A_{top} = \pi r^2$ $A_{base} = \pi r^2$ $A_{side} = 2\pi rh$ $SA = 2\pi r^2 + 2\pi rh$	$V = (\text{area of base}) \times h$
Square-based Pyramid	$A_{triangle} = \frac{1}{2}bs$ $A_{base} = b^2$ $SA = 2bs + b^2$	$V = \frac{1}{3} \times (\text{area of base}) \times h$
Rectangular Prism	$SA = wh + wh + lw + lw + lh + lh$ <b>or</b> $SA = 2(wh + lw + lh)$	$V = (\text{area of base}) \times h$
General Right Prism	$SA = \text{the sum of the areas of all the faces}$	$V = (\text{area of base}) \times h$
General Right Pyramid	$SA = \text{the sum of the areas of all the faces}$	$V = \frac{1}{3} \times (\text{area of base}) \times h$



## Graduation Numeracy Reference Pages



### RATES OF CHANGE



Equation of a line:

$$y = mx + b$$

$$Ax + By + C = 0$$

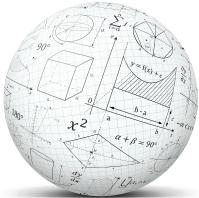
$$y - y_1 = m(x - x_1)$$



Rate of change (slope) of a line:

$$m = \frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



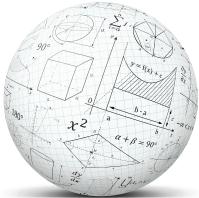
## Graduation Numeracy Reference Pages



### MEASUREMENTS

Unit	Symbol
kilometre	km
metre	m
centimetre	cm
millimetre	mm
tonne (metric ton)	t
gram	g
kilogram	kg
microgram	$\mu\text{g}$
litre	L
millilitre	mL

Conversions	
<b>Length</b>	1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm
<b>Mass</b>	1 t = 1000 kg 1 kg = 1000 g 1 g = 1 000 000 $\mu\text{g}$
<b>Volume</b>	1 L = 1000 cm <sup>3</sup> 1 L = 1000 mL



# Graduation Numeracy Reference Pages



**TIME**

## 12-Month Calendar

JANUARY						
SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY						
SU	MO	TU	WE	TH	FR	SA
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH						
SU	MO	TU	WE	TH	FR	SA
			1	2	3	4
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL						
SU	MO	TU	WE	TH	FR	SA
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY						
SU	MO	TU	WE	TH	FR	SA
	1	2	3	4	5	6
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE						
SU	MO	TU	WE	TH	FR	SA
		1	2			
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY						
SU	MO	TU	WE	TH	FR	SA
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST						
SU	MO	TU	WE	TH	FR	SA
		1	2	3	4	5
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER						
SU	MO	TU	WE	TH	FR	SA
			1			
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OCTOBER						
SU	MO	TU	WE	TH	FR	SA
		1	2	3	4	5
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER						
SU	MO	TU	WE	TH	FR	SA
		1	2	3		
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER						
SU	MO	TU	WE	TH	FR	SA
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## 24-Hour Clock



## Time

1 year ≈ 365 days

1 year ≈ 52 weeks