TEST

11
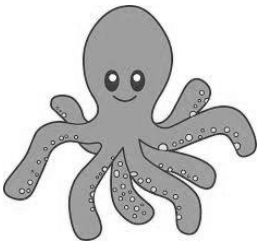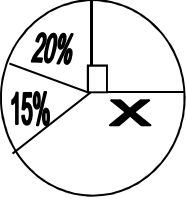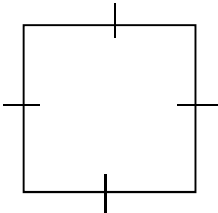
MATHEMATICS TEST 11   TIME- 75 MINUTES
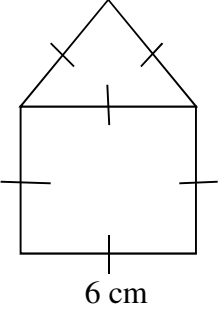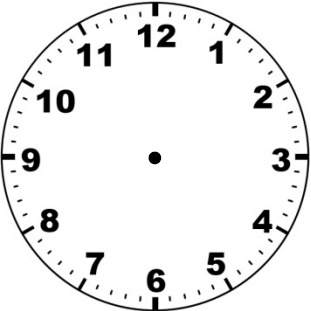
SECTION 1
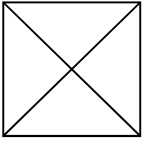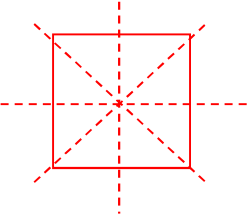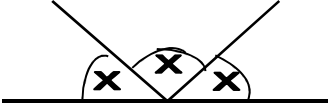
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Calculate the sum of 6954, 83721 and 435. Answer:_____	**91110**	
2.	Write in words: 303,003 Answer: _____ _____ _____	**Three hundred and three thousand and three.**	
3.	An octopus has 8 arms as shown below. How many arms will 16 octopuses have? Answer:_____arms	1 octopus = 8 arms 16 octopuses = 8 x 16 **= 128 arms**	
4.	Write 83 054 to the nearest hundred. Answer:_____	83 054 _____ **83 000**	

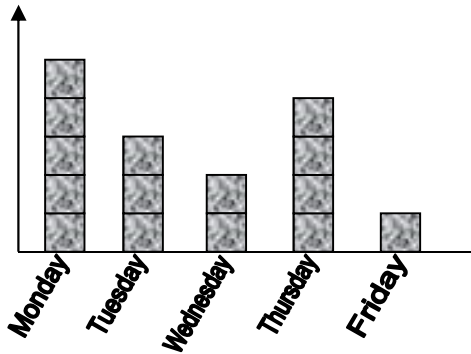| 5.	Arrange the fractions below in descending order. $\frac{3}{4}$ $\frac{7}{12}$ $\frac{2}{3}$ $\frac{5}{6}$ Answer: _____	$\frac{3}{4}$ $\frac{7}{12}$ $\frac{2}{3}$ $\frac{5}{6}$ $\frac{9 \quad 7 \quad 8 \quad 10}{12}$ $\frac{5}{6}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{7}{12}$	
6.	A class has 24 pupils. If on a Monday $\frac{1}{4}$ was absent, how many pupils were present? Answer:_____	If Absent $= \frac{1}{4}$, then Present $= \frac{3}{4}$ $\therefore \frac{3}{4} \text{ X } \frac{24}{1}$ **= 18 pupils present**	

7.	The shape is divided as shown below.
	
	What percent does x represent?
	Answer:_____
		X% = 100% - (25% + 20% + 15%)
		   = 100% - 60%
		   =40%	

8.	Calculate the VAT (15%) on a television set with a cash price or $600.00 Cash Price - $600 Answer: $_____	Vat = 15% x 600 $= \frac{15}{100} \text{ X } \frac{600}{1}$ **= $90**	

9.	A rope is 3.5 m long. What is its length in centimeters? Answer:_____cm	3.5m = 3.5m x 100 **= 350cm**	
10.	How many 25¢ coins will Jim get in exchange for $7.00? Answer:_____	$1 = 4 25c $ 7 = 4 x 25c **= 28 – 25c**	
11.	The perimeter of the square below is 36cm. Calculate its area. Answer:_____cm^2	Perimeter = 36cm Side = 36 ÷ 4 = 9cm Area of square = S x S = 9 x 9 **= 81cm^2**	
12.	Allan bought a pen for $13.50. He sold it for $17.00. How much profit did he make? Answer: _____	Profit = S.P. – C.P = $17.00 - $ 13.50 **= $3.50**	

13.	The diagram below shows a compound shape made up of an equilateral triangle mounted on a square. 6 cm Calculate the perimeter of the above shape. Answer:_____	Peri. of shape = 6 + 6 + 6 + 6 + 6 **= 30cm**	
14.	The time on a digital clock is 6:55 PM. If the clock is 10 minutes slow, draw the hands in the clock to show the correct time. Answer:_____		
15.	Sue left home at 7:30 am and returned at 2:00 pm on the same day. For how many hours was she away from home? Answer:_____	2: 00 = 14 :00 (24hrs) 14 : 00 – 7 : 30 = 6 : 30 $= 6\frac{1}{2}$ **hrs**	

16.	How many more lines of symmetry can be drawn in the shape below? Answer:_____	**2 more lines of symmetry**	
17.	In the diagram below, the three angles labelled 'x' are equal. Calculate the value of 'x'. Answer:_____degrees	$3 X^0 = 180^0$ $= 180^0 \div 3$ $X^0 = 60^0$	
18.	Harry is facing North. He turns **clockwise** to face East. Through how many degrees has Harry turned? Answer:_____degrees.	**¼ turn = 90^0**	

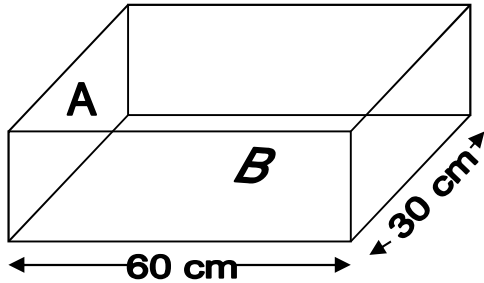| 19.	The graph below shows the number of children buying ice-cream from Monday to Friday.	Thursday – Tuesday 48 – 36 **= 12 more children**	
	  represents 12 children. How many more children bought ice-cream on Thursday than on Tuesday? Answer:_____		
20.	The pie chart below shows the favourite colours of the students of Standard 4. The angle for Green is x^0. Calculate the value of x. Answer:_____^{0}	$X^0 = 360^0 - (85^0 + 110^0 + 90^0)$ $= 360^0 - 285^0$ $= 75^0$	
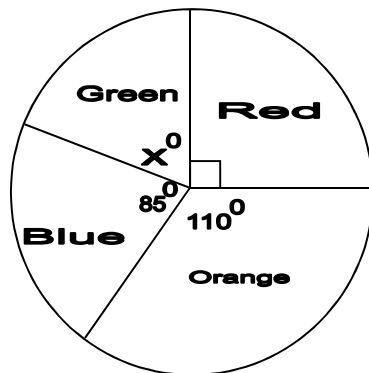
SECTION 2

Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
21.	Calculate: $$5\frac{3}{4} + 2\frac{5}{6}$$ Answer:_____(2)	$5\frac{3}{4} + 2\frac{5}{6}$ $7 \underline{\quad 9 \quad + \quad 10\quad} = 7\frac{19}{12}$ 12 $=8\frac{7}{12}$	
22.	Tony has 48 marbles. Alfred has twice as many as Tony. How many marbles do they have altogether? Answer:_____ marbles(2)	Altogether = 48 + (48 x 2) = 48 + 96 **= 144 marbles**	
23.	On a map 2cm represent 7km. On that same map, what distance will be represented by 8cm? Answer:_____km (2)	2cm = 7km 1cm $=\frac{7}{2}$ 8cm $=\frac{7}{2}$ x $\frac{8}{1}$ **= 28km**	
24.	Bob set out on a journey. He cycled $\frac{5}{12}$ of the journey, jogged $\frac{1}{3}$ and walked the rest. What fraction of the journey did he walk? Answer:_____(2)	Walked = $1 - \{\frac{5}{12} + \frac{1}{3}\}$ = $1 - \{ \underline{5 + 4}\}$ $\quad\quad\quad 12$ = $1 - \frac{9}{12}$ = $\frac{3}{12}$ = $\frac{1}{4}$	

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25.	A man takes 15 minutes to pack 8 crates of fruits. At this same rate, how many crates of fruits will he be able to pack in $1\frac{1}{2}$ hours? Answer:_____(3)	$15\text{mins} = \frac{1}{4}\text{ hr}$ $1\frac{1}{2}\text{ hrs.} = 6 - \frac{1}{4}\text{hrs}$ 8×6 **= 48 crates**	
26.	Write in the box below the sign, $>$ or $<$, that CORRECTLY completes the number sentence. $\frac{7}{8}$ ☐ $\frac{2}{3}$ Answer:_____ (2)	$\frac{7}{8} = \frac{21}{24}$ $\frac{2}{3} = \frac{16}{24}$ $\therefore \frac{7}{8} > \frac{2}{3}$	
27.	Complete the table below: | Fraction	Decimal	Percentage
---	---	---
$\frac{2}{5}$	(a)_____	40%
(b)_____	0.625	(c)_____ | Answer:_____(3)	(a) **0.4** (b) $0.625 = \frac{625}{1000}$ $= \frac{5}{8}$ (c) **62.5% or $62\frac{1}{2}$ %**	

28.	Study the number pattern below. $$1, 4, 9, 16, \underline{\quad}, 36, \underline{\quad\quad}$$ (a) Write in the two missing numbers. Answer:_____ (2) (b) What is the twelfth number in this number pattern? Answer:_____(1)	(a) Squared Numbers $5^2 = $ **25** $7^2 = $ **49** (b) $12^2 = 12$ x 12 = **144**	
29.	Share $160 between Mary and Frank, giving Frank $20 more. How much money would Mary receive? Answer:_____ (3)	$160 – $20 = $140 $140 ÷ 2 = $70 ∴ Frank = $70 + $20 = $90 **Mary = $70**	

30.	The mean of three numbers is 68. If the first two numbers are 55 and 84, what is the third number?
	
	Answer:_____(2)
		If Mean = 68, then Total = 68 x 3
		 Total = 204
		3rd Number = 204 – (55 + 84)
		          = 204 – 139
		          = **65**	

31.	A basket contains 5 apples, 6 bananas and 9 oranges. What percentage of the fruits are bananas?
	
	Answer:_____% (2)
		Total Fruits = 5 + 6 + 9
		          = 20
		Bananas $= \dfrac{6}{20}$ x $\dfrac{100}{1}$
		
		          = **30%**	

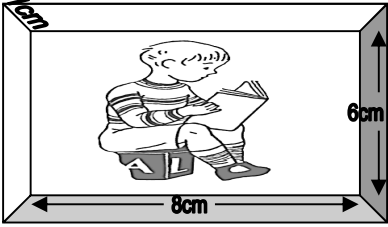|			
32.	The volume of the cuboid shown below is 54 000cm^3. A B 30 cm 60 cm (a) What is the area of its base labelled B? Answer:_____cm^2. (1) (b) What is the height of the shape? Answer:_____cm. (1) (c) How many square faces does this cuboid have? Answer:_____(1)	(a) Area of base = L x W = 60 x 30 = **1800cm²** (b) Height = $\frac{\text{Volume}}{\text{L x W}}$ = $\frac{54\ 000}{60\ \text{x}\ 30}$ = **30cm** (c) **2 square faces**	

33.	A picture measuring 8cm by 6cm is stuck onto a cardboard sheet, leaving a 1cm border all around as shown below.	(a) L = 10cm W = 8cm
		     Area of card board = L x W
		                         = 10 x 8
		                         = 80cm²
		
		(b) Area of picture = L x W
		                  = 8 x 6
		                  = 48cm²
		
		Area of cardboard not covered=
		= 80cm² – 48cm²
		= 32cm²	

	  (a) Calculate the area of the cardboard. Answer:_____cm². (2) (b) Calculate the area of the cardboard that is not covered by the picture. Answer:_____cm². (1)		

34.	A labourer worked Monday to Friday from 8:00 am to 4:00 pm at $23 per hour. Calculate the wage he received for the week.
	
	Answer:_____ (3)
		1 day = 8 hours
		5 days = 8 x 5
		         = 40 hours
		1 hr. = $23
		40 hrs. = $23 x 40
		          = $920	

35.	The entrance fee for a circus was $18 for a child and double that price for an adult. How much would a party of 3 adults and 5 children have to pay in total to enter the circus? Answer:_____(3)	Child = $18 Adult = $36 ($18 x 2) 3 adults + 5 children = (3 x $36) + (5 x $18) = $108 + $90 **= $ 198**	

36. Shelly is facing north as shown in the diagram below.
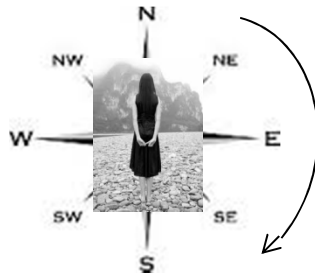
(a) If she turns in a clockwise direction and is now facing SE, through how many degrees did she turn?
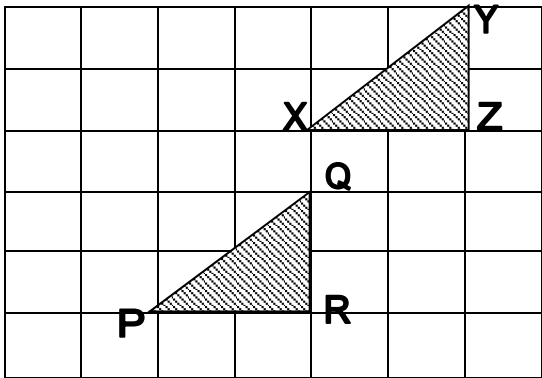
Answer:_____(1)

(b) From this new position, she now makes a $\frac{1}{2}$ turn in a clockwise direction. What will be her new position?

Answer:_____(1)

(a) 8 spaces = 360^0
1 space = $360^0 \div 8$
3 spaces = 3 x $(360^0 \div 8)$
= 3 x 45^0
= **135^0**

(b) **North West**

37. The triangle XYZ is moved to the position of triangle PQR.

(a) Name the movement.

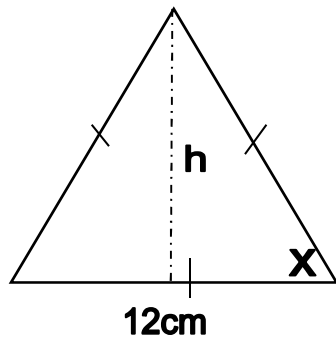Answer:_____(1)

(b) Describe this movement FULLY.

Answer:_____

_____

_____(1)

(a) **Slide/Translation**

(b) **Slide 3 units down and 2 units left**

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38.	The diagram below shows an equilateral triangle.	(a) $X^0 = 180^0 \div 3$ $\quad\quad X^0 = \mathbf{60^0}$	

38. The diagram below shows an equilateral triangle.

(a) Calculate the value of angle **x**.

Answer:_____^{0}. (1)

b) If the above triangle has an area of 48cm^2, calculate the value of **h.**

Answer:_____cm. (2)

(a) $X^0 = 180^0 \div 3$

$\quad X^0 = \mathbf{60^0}$

(b) Height = Area ÷ Base

$\quad\quad = 48\text{cm}^2 \div 12\text{cm}$

$\quad\quad = \mathbf{4cm}$

39. XY is a line of symmetry of the incomplete figure ABCD shown below.
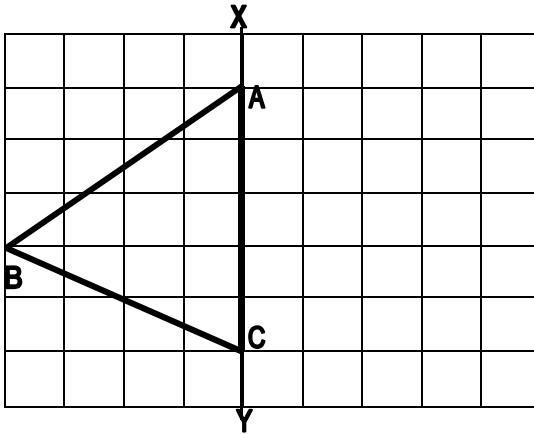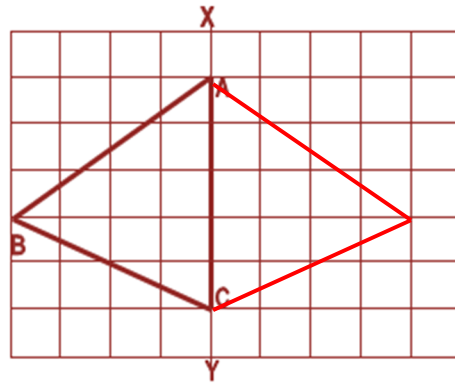

(a) Complete the drawing of ABCD.

(2)

(b) Circle the term from the list below that BEST describes ABCD.

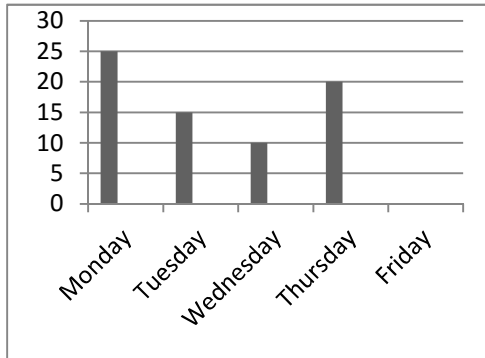|	
Parallelogram	Square
Quadrilateral	Rhombus

(1)

(a)

(b) Parallelogram

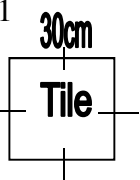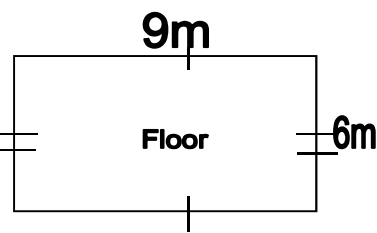| 40.	The incomplete graph below shows the marks that John scored in Mathematics each day during a particular week.	Friday = 80 – (25 + 15 + 10 + 20) = 80 – 70 = **10 marks**	

The incomplete graph below shows the marks that John scored in Mathematics each day during a particular week.

John scored a total of 80 marks for that week. Complete the bar graph to show how many marks he scored on Friday.

Answer:_____ (2)

SECTION 3

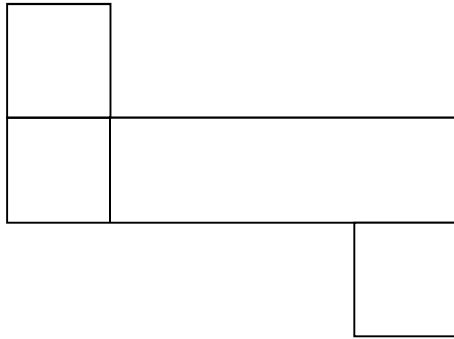**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	1 30cm Tile 9m Floor — 6m Mr. James wants to tile his 9m by 6m floor using tiles as shown above. (a) Calculate the area of a tile. Answer:_____cm²(1) (b) How many tiles are needed to cover the floor? Answer:_____(2) (c) If tiles are sold in boxes of 12 at $15 per box, how much money would Mr. James have to spend on tiles? Answer:_____(2)	(a) Area of tile = S x S 　　　　= 30 x 30 　　　　**= 900cm²** (b) Tiles needed = $\frac{900 \times 600}{30 \times 30}$ 　　　**= 600 tiles** (c) No. of boxes needed = 600 ÷ 12 　　　　= 50 Spend = 50 x $15 　　**= $750**	

42.	A farmer harvested 1200 tomatoes from his garden. He sold $\frac{3}{8}$ on Monday and $\frac{1}{3}$ of the remainder on Tuesday.
	
	 (a) How many tomatoes were sold on Monday?
	
	 Answer:_____ (1)
	
	 b) How many tomatoes were sold on Tuesday?
	
	 Answer:_____ (1)
	
	 (c) If the tomatoes he was left with were placed in bags of 10 and sold at \$16 per bag on Wednesday, how much money would he collect from Wednesday's sales?
	
	 Answer:_____ (2)
		(a) Sold $= \frac{3}{8} \times \frac{1200}{1}$
		      = 450 tomatoes
		
		 (b) Remainder = 1200 – 450
		             = 750 tomatoes
		    Tuesday $= \frac{1}{3} \times \frac{750}{1}$
		
		          = 250 tomatoes
		
		 (c) Left with = 1200 – (450 + 250)
		        = 1200 – 700
		        = 500
		    Bags = 500 ÷ 10
		       = 50 bags
		
		    Wednesday's Sales = 50 x \$16
		            = \$800	

43.	Ms. Flora borrowed $2400 at 10% simple interest for 2 years.	(a) S.I = $\dfrac{P \times R \times T}{100}$
		$= \dfrac{2400 \times 10 \times 2}{100}$
	(a) How much interest would she have to pay for the two years?	$= \textbf{\$480}$
	Answer:$_____ (1)	(b) Amount = $2400 + $480
		$= \textbf{\$ 2880}$
	b) How much money did she repay altogether?	(c) Monthly Payment = $2880 ÷ 12
		$= \textbf{\$240}$
	Answer:_____ (2)	
	c) Ms. Flora repaid the total amount in equal monthly payments over a period of 1 year. How much money did she pay EACH month?	
	Answer:_____ (2)	

44. Complete the table below:

Item	No.	Cost per Item	Cost
Notebooks	4	$3.99	_____
Markers	___	$2.50	$17.50
Pens	3	_____	$ 20.25
Total Cost			
Change from $100			

(5)

(a) $3.99 x 4 = **$ 15.96**

(b) $17.50 ÷ $2.50 = **7**

(c) $20.25 ÷ 3 = **$6.75**

(d) $15.96 + $17.50 + $6.75
    = **$53.71**

(e) $100 - $53.71
    = **$46.29**

45.	Observe the figure below.	(a)

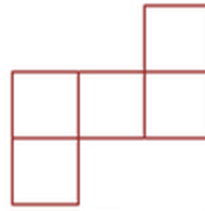(a) Draw TWO lines on the figure above so that it forms the net of a solid.

Answer:_____ (2)

(b) Name the solid formed when the net is folded.
Answer:_____(1)

(c) The solid formed has _____ edges and _____vertices. (2)

(a)

(b) Cube

(c) 12 edges   8 vertices

| 46. | The temperature for one week in February is shown on the table below. | (a) Mean = $32^0 + 29.5^0 + 29.0^0 + 35.5^0 + 29.5^0 + 28^0 + 30^0$ $= 213.5 \div 7$ $= \mathbf{30.5^0}$ |

Days	Temperature
Sunday	32^0
Monday	29.5^0
Tuesday	29.0^0
Wednesday	35.5^0
Thursday	29.5^0
Friday	28.0^0
Saturday	30^0

(a) Calculate the mean temperature for the week.

Answer:_____(2)

(b) What is the difference between the highest and the lowest temperature recorded?

Answer:_____(2)

(c) What was the modal temperature?

Answer:_____(1)

(b) $35.5^0 - 28^0 = \mathbf{7.5^0}$

(c) Modal Temperature = $\mathbf{29.5^0}$

End of Test 11