TEST

13

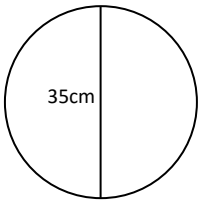
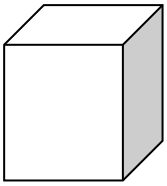
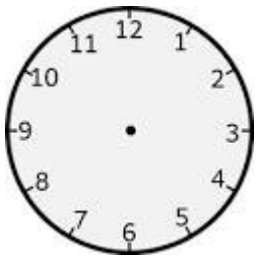
MATHEMATICS TEST 13 TIME- 75 MINUTES

SECTION 1

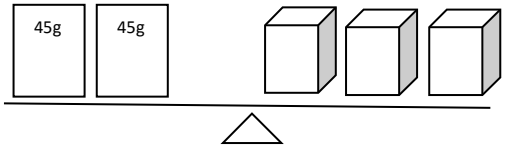
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

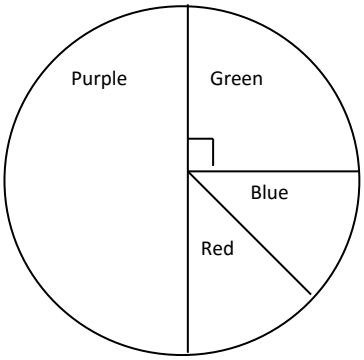
No.	Items	Working Column	Marks
1.	What is the numeral for eleven million, three hundred and twelve thousand and seventy-five. Answer: _____	**11 312 075**	
2.	What is the value of the digit 6 in the number 303.64? Answer: _____	$\frac{6}{10}$	
3.	Round off the numeral 23584 to the nearest hundred. Answer: _____	**23 600**	
4.	Marc had \$85.00. He bought a toy for \$16.00 and saved \$32.00. He kept the rest of his money for school. How much money did he have for school? Answer: \$ _____	School = \$85 – (\$16 + \$32) = \$85 - \$48 = **\$37**	

5.	Write <, > or = to correctly complete the statement below. ¼ ☐ 0.25 Answer: _____	$\frac{1}{4} = 0.25$	
6.	1820 = (1x1000) + (8x100) + (2x10) + (0x☐). What number goes into the box? Answer: _____	☐ = **1**	
7.	Find the sum of 7234, 306 and 231. Answer: _____	**7771**	
8.	If Ryan earns $104.00 in a day and works 8 hours a day, how much is he paid for ONE hour of work? Answer: _____	8 hours = $104 1 hour = $104 ÷ 8 **= $13**	
9.	A jug contains 250ml of water. How many litres of water will 9 such jugs contain if they are filled? Answer: _____litres	1 jug = 250ml 9 jugs = 250 x 9 = 2250 ml ÷ 1000 = **2.25l**	

10.	 Calculate the circumference of the circle. Answer: _____cm	Circumference = D x π = 35 x $\frac{22}{7}$ = **110 cm**	
11.	 7cm Calculate the volume of the cube shown above. Answer: _____cm^3	Volume of cube = S x S x S = 7 x 7 x 7 = **343cm^3**	
12.	6:30a.m The digital clock above shows the time that Mr. Douglas leaves home. If he reaches to work 90 minutes later, draw the hands on the clock face below to show the time he reaches to work. 		

13.	 1670g The bananas shown above weigh 1670g. Express this weight in kilograms. Answer: _____ kg	1670g ÷ 1000 **= 1.67 kg**	
14.	Name the solid that contains one circular edge and an apex. Answer :_____	**cone**	
15.	How many 25 cent coins will Susan get if she changed $9.00 into 25 cent pieces? Answer:_____	$1 = 4 coins $9 = 4 x 9 **= 36 –25c coins**	
16.	Keron bought a new suit for $300.00 and sold it to make a profit of $60.00. Calculate his profit percent. Answer: _____%	Profit% = $\frac{\text{Profit}}{\text{C.P}}$ x 100 = $\frac{60}{300}$ x $\frac{100}{}$ **= 20%**	

17.	 The scale above is balanced. If each bag on the left weighs 45g, calculate the weight of each box on the right if they are of equal weights. Answer: _____ g	45g x 2 = 90g 3 boxes = 90g 1 box = 90g ÷ 3 = **30g**	
18.	What unit of measurement should be used to measure the weight of a watermelon? Answer: _____	**kg**	
19.	If the average of 8 numbers is 312,what is the total of the 8 numbers? Answer: _____	Mean = 312 Total = Mean x N(n) = 312 x 8 = **2496**	

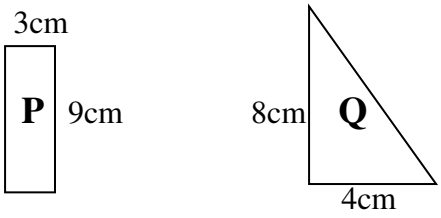
20.	The pie chart shows the favourite colours of pupils in a Std 5 class.  If six pupils liked blue and six pupils liked red, how many pupils are in the class? Answer: _____ pupils	$\frac{1}{4} = 12$ $1 = 12 \times 4$ **= 48 pupils**	

SECTION 2

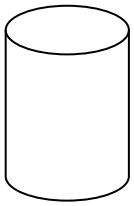
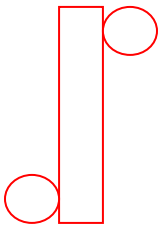
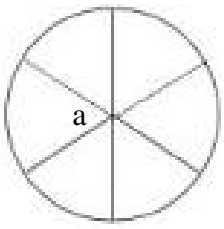
Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.

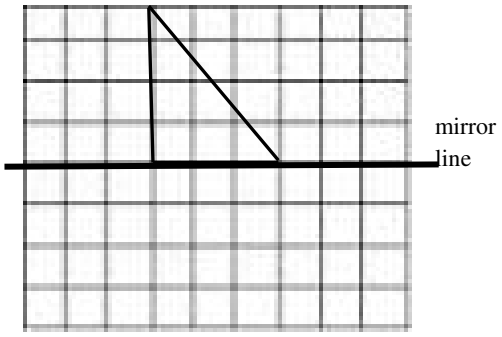
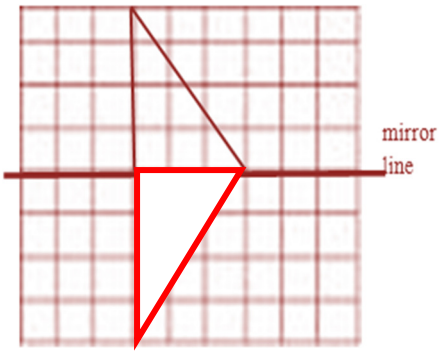
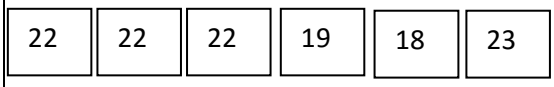
No.	Items	Working Column	Marks
21.	What is the difference between $3\frac{1}{2}$ and $2\frac{1}{3}$? Answer: _____ (2)	$3\frac{1}{2} - 2\frac{1}{3}$ $1\frac{3 - 2}{6}$ $= \mathbf{1\frac{1}{6}}$	
22.	There are 60 apples in a bag. If 0.3 is sold and $\frac{1}{2}$ of the remainder is used to make pie, how many apples remain in the bag? Answer _____apples (3)	Sold = 60 x 0.3 = 18 Pie = $\frac{1}{2}$ x (60 – 18) = $\frac{1}{2}$ x $\frac{42}{1}$ = 21 Bag = **21 apples**	
23.	Martha had $420.00. If she spent 25% of it, how much was LEFT? Answer: _____ (2)	Spent = 25% Left = 75% Left = $\frac{3}{4}$ x $\frac{420}{1}$ = **315**	
24.	At a concert with 360 people, $\frac{2}{5}$ are men and the rest are women. How many women were at the concert? Answer: _____women (3)	If $\frac{2}{5}$ = men, then $\frac{3}{5}$ = women Women = $\frac{3}{5}$ x $\frac{360}{1}$ = **216**	

25.	On an estate containing 3478 sorrel trees, 1689 were harvested on Monday, 1216 on Tuesday, and the remainder was harvested over the weekend. How many were harvested over the weekend? Answer:_____trees (3)	Weekend = 3478 – (1689 + 1216) = 3478 – 2905 = **573 trees**	
26.	In a cinema there were 235 rows of chairs. If each row had 25 chairs, how many chairs were there in all? Answer: _____chairs (2)	235 x 25 = **5875 chairs**	
27.	40% of the books in a library totals 280. How many books would make up 80% of the library? Answer: _____books (2)	40% = $\frac{2}{5}$ $\frac{2}{5}$ = 280 1 = $\frac{280}{1}$ x $\frac{5}{2}$ = 700 80% x 700 = 0.8 x 700 = **560 books**	
28.	Beth's dad gave her $365.00 to share with her sister Lucy. How much money did Lucy get if Beth got $20.00 MORE than her? Answer: $_____ (3)	$365 - $20 = $345 $345 ÷ 2 = $172.50 Beth = $172.50 + $20 = $ 192.50 Lucy = **$172.50**	

29.	Of the two shapes below, which has the greater area?  Answer: _____ (2)	Area of P = L x W = 9 x 3 = 27cm^2 Area of Q = $\frac{B \times H}{2}$ = $\frac{8 \times 4}{2}$ = 16cm^2 **∴ P has the greater area**	
30.	A cashier works from Monday to Friday and earns $15.00 per hour. If her hours of work are 7am to 3pm daily, what is her WEEKLY earnings? Answer: $_____ (3)	1 hour = $15 8 hours = $15 x 8 = $ 120 1 day = $120 5 days = $ 120 x 5 = **$600**	
31.	Dan bought a television for $2795. If he gets a 20% discount, how much will the television cost? Answer: $_____ (2)	Discount = 20% Paid = 80% of $2795 = $\frac{4}{5} \times \frac{2795}{1}$ = **$2236**	
32.	A field has a radius of 14m. If an athlete runs around the field four times, what distance did he run? Answer: _____ (3)	Circumference = D x π = 28 x $\frac{22}{7}$ = 88m 4 times = 88 x 4 = **352m**	

33.	Ms. Ragoo borrowed $25000.00 from a bank at a rate of 6% per annum for a period of 5 years. (a) How much interest would she have to pay at the end of the 5 years? Answer: $_____ (2) (b) What is the total amount she would have to repay the bank? Answer: $_____ (1)	(a) Simple Interest = $\frac{P \times R \times T}{100}$ $= \frac{25000 \times 6 \times 5}{100}$ = **$7500** (b) Amount = P + S.I = $25 000 + $7 500 = **$32 500**	
34.	Brandon left school at 3:15pm and reached home 30 minutes before his favourite cartoon started at 6:30pm. How long did he take to get home? Answer: _____ (2)	Left school = 3 : 15 Home = 6 :30 - :30 = 6 : 00pm Time taken = 6 : 00 – 3 : 15 = **2hrs 45 mins or $2\frac{3}{4}$ hrs**	
35.	A shopkeeper bought two dozen chocolates for $60.00 and sold them at $2.75 each. What was the profit percent? Answer: _____ (3)	C.P = $60 S.P = $ 2.75 x 24 = $ 66 Profit = S.P – C.P = $66 - $60 = $6 Profit Percent = $\frac{6}{60} \times \frac{100}{1}$ = **10%**	

36.	(a) Name the solid shown below.  Answer: _____ (1) (b) Draw the net of the solid in the space provided below. (1)	**Cylinder** 	
37.	The circle shown below is divided into six EQUAL parts. Calculate the size of angle a.  Answer: _____degrees (2)	Number of parts = 6 6 parts = 360^0 1 part = $360^0 \div 6$ a^0 = **60^0**	

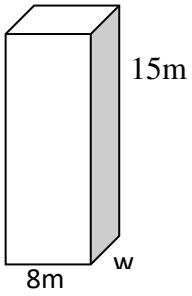
38.	(a) Flip the shape below along the mirror line.  (2) (b) Name the combined shape formed. Answer: _____ (1)	(a)  (b) Isosceles Triangle	
39.	 (a) What is the mean of the set of numbers above? Answer: _____ (1) (b) What is the mode of the set of numbers above? Answer: _____ (1)	(a) Mean = $\frac{22+22+22+19+18+23}{6}$ = $\frac{126}{6}$ = **21** (b) Mode = **22**	
40.	James scored an average of 55 runs in 3 cricket matches. If he scored 35 runs in the next match, what was his new average? Answer _____ (3)	Average of 3 matches = 55 Total = 55 x 3 = 165 4th Match = 165 +35 = 200 Average = 200 ÷ 4 = **50 runs**	

SECTION 3

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

41.	At a farm, 25% of the animals were sheep, 0.45 were horses and the rest of the 120 animals were cows. (a) What percent of the animals on the farm were cows? Answer: _____ (1) (b) If 10 horses were sold, how many horses would REMAIN on the farm? Answer: _____ (2) (c) How many more cows than sheep were there on the farm? Answer: _____ (2)	(a) Cows = 100% - (25% + 45%) = 100% - 70% = **30%** (b) 30% = $\frac{3}{10}$ $\frac{3}{10}$ = 120 1 = $\frac{120}{1}$ x $\frac{10}{3}$ = 400 animals Horses = $\frac{45}{100}$ x $\frac{400}{1}$ = 180 horses Left with = 180 – 10 = **170 horses** (c) Cows = 30% Sheep = 25% Difference = 30% - 25% = 5% x 400 = **20 more cows**	
42.	Mr. Diaz bought 60 carrots. He used $\frac{1}{3}$ to make carrot juice, gave away $\frac{1}{4}$ of the remainder to his friend and sold the rest. (a) What fraction of the carrots was sold? Answer: _____ (3) (b) How many carrots did he give to his friend? Answer: _____ (2)	(a) Used + gave away = $\frac{1}{3}$ + ($\frac{1}{4}$ x $\frac{2}{3}$) = $\frac{1}{3}$ + $\frac{1}{6}$ = $\frac{1}{2}$ Left with = 1 - $\frac{1}{2}$ = $\frac{1}{2}$ (b) Friend = $\frac{1}{6}$ x $\frac{60}{1}$ = **10 carrots**	

43. The volume of the cuboid shown is $480m^3$. The length is 8m and the height is 15m.



(a) Calculate the width of the cuboid.

Answer: _____m (2)

(b) Find the AREA OF THE BASE of the cuboid.

Answer: _____m^2 (3)

(a) Width = $\frac{\text{Volume}}{\text{L x H}}$

$= \frac{480m^3}{15 \times 8}$

$= \frac{480m^3}{120m^2}$

= 4m

(b) Area of base of cuboid = L x W

= 8 x 4

= $32m^2$

44. The table shows dad's work schedule.

DAYS	HOURS WORKED	HOURLY RATE
Monday to Saturday	8am-4pm	$15.00
Sundays and Public Holidays	9am to 1pm	Time and a half

(a) What is dad's weekly wage if he works one week from Monday to Sunday?

Answer: $_____ (3)

(b) How much does dad earn if he works on Christmas Day and Boxing Day?

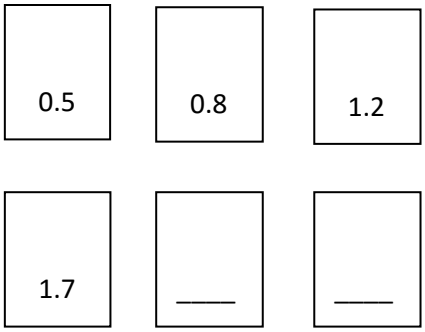
Answer: $_____ (2)

(a) 1 hour = $15
8 hours = $15 x 8
1 day = $120
6 days = $120 x 6
= $720
Sunday = Time and a half ($1\frac{1}{2}$)
= $\frac{15}{1}$ x $\frac{3}{2}$
= $22.50/hr

1 hour = $22.50
4 hours = $22.50 x 4
= $ 90
Total Weekly wage = $720 + $90
= **$810**

(b) Christmas Day and Boxing Day
= 4 + 4
= 8 overtime hours

1 hour overtime = $ 22.50
8 hours overtime = $ 22.50 x 8
= **$ 180**

45.	Cards are placed on a table to form a pattern as shown below.  (a) Complete the pattern above with the 2 missing numbers. Answer: _____ and _____(2) (b) What would be the eighth number in the pattern? Answer: _____ (2) (c) Which two cards in the pattern give a total of 2.0? Answer: _____ and _____(1)	(a) 1.7 + 0.6 = **2.3** 2.3 + 0.7 = **3.0** (b) 3.8 + 0.9 **= 4.7** (c) **0.8 + 1.2** = 2	

46. The pictograph shows the flavours of ice-cream liked by pupils in a class.

Flavours	Number of pupils
Chocolate	☺☺☺
Vanilla	☺☺☺☺☺
Strawberry	☺☺☺
Peanut	☺

☺ = 3 pupils

(a) Which ice-cream flavour is most liked?

Answer: _____ (1)

(b) How many more pupils liked vanilla than peanut?

Answer: _____pupils (2)

(c) What percentage of pupils liked chocolate ice-cream?

Answer: _____ (2)

(a) **Vanilla**

(b) 4 ☺ = 4 x 3

= 12 more pupils

(c) Total = 12 x 3
= 36 pupils

Chocolate = $\frac{9}{36}$ x $\frac{100}{1}$

= 25%

END OF TEST 13