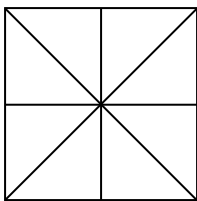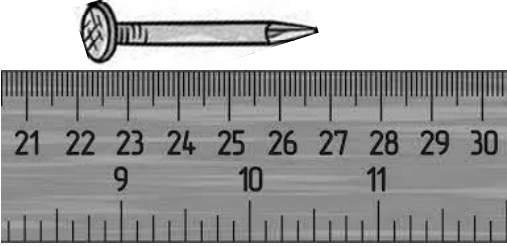# TEST 3

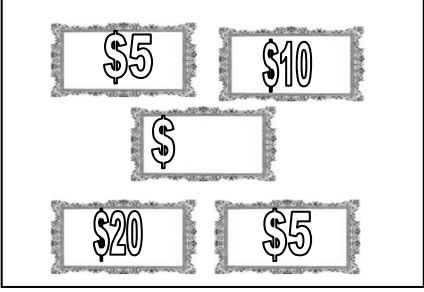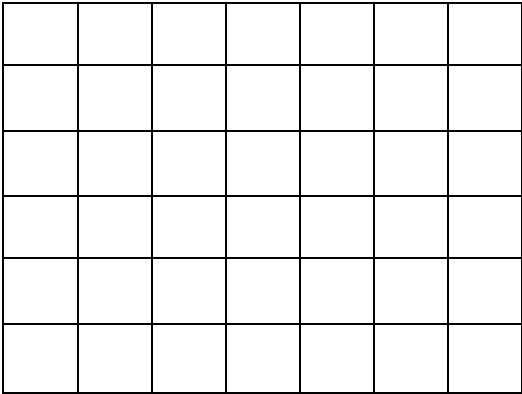# MATHEMATICS TEST 3   TIME- 75 MINUTES

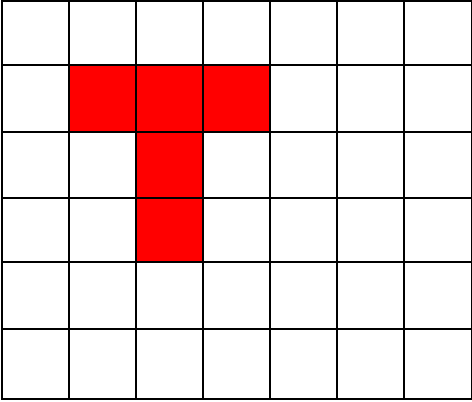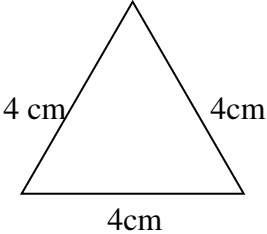## SECTION 1

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

No.	Items	Working Column	Marks
1.	Express $\dfrac{4}{5}$ as a decimal fraction. Answer:_____	**0.8**	
2.	◯ and ▢ represent two numbers If ◯ x ◯ =36 And ◯ + ▢ = 15 What is the value of ▢ ? Answer:_____	◯ X ◯ = 36 ◯ = 6 6 + ▢ = 15 ▢ = 15 – 6 　　= **9**	
3.	A square cake is cut into 8 equal slices as shown below. *[square divided into 8 triangular slices]* How many similar slices can be obtained from 3 ¼ identical cakes? Answer:_____	1 cake = 8 slices $3\dfrac{1}{2}$ cakes $= \dfrac{8}{1}$ x $\dfrac{7}{2}$ 　　= **28 slices**	
4.	Write the numeral which represents: (4x 10,000) + (6 x 1000)+ (8 x 10)+ (1 x1) Answer:_____	**46081**	

5.	Sam sold 25 stamps. He had 45 stamps left. How many stamps had Sam at first? Answer:_____	Total = 25 + 45 **= 70 stamps**	
6.	Mark weighs 45.35kg and Joe weighs 30.6kg. How much heavier is Mark than Joe? Answer:_____	Mark = 45.35 – 30.60 14.75 **14.75 kg heavier**	
7.	Calculate 364 x 25 Answer:_____	**9100**	
8.	Express 5\8 as a percent. Answer:_____	$\dfrac{5}{\cancel{8}\,2} \times \dfrac{\cancel{100}\,25}{1} = \dfrac{125}{2}$ $= 62\dfrac{1}{2}\%$ **or 62.5%**	
9.	3 ¼ kilometres = _____ metres. Answer:_____	**3250 m**	
10.	What is the length of the nail? Answer:_____cm	**5cm**	

11.	Ram has $60.00. What is the value of the unmarked bill? Answer:_____	Marked Bills = 5 +10 +20 +5 = $40 Total = $60 Unmarked Bill = $60 - $40 = **$ 20**	
12.	Sunita left home at 10:20 am and reached the mall 1 hour and 40 minutes later. At what time did Sunita arrive at the mall? Answer:_____	1 0 : 2 0 1 : 4 0 1 1 : 6 0 1 2 : 0 0 **12:00 noon**	
13.	A stove costs $1500.00 without VAT. Calculate how much VAT a customer will pay if VAT is charged at 15% of the cost of the article. Answer:_____	C.P = $ 1500 $VAT = \frac{15}{100} \times \frac{1500}{1}$ **= $225**	
14.	Ram ran 100 metres in 10.03 seconds while Paul ran it in 10.13 seconds. Who ran faster? Answer:_____	**Ram (10.03 < 10.13)**	

15.	Draw the net of a cube on the grid given below. 1 cm Grid		
16.	 The clock shown above is twenty minutes slow. What is the correct time? Answer:_____	**10:15**	
17.	 4 cm 4cm 4cm Name the type of triangle shown. Answer:_____	**Equilateral Triangle**	
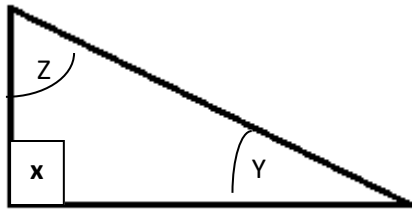
18.	 Arrange the angles in the triangle above in an ascending order. Answer:_____	**X Z Y**	
19.	Shade the appropriate section in D to continue the pattern below. A B C D 		
20	On the grid below, draw an isosceles triangle with a base of six centimeters. 1 cm grid		
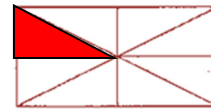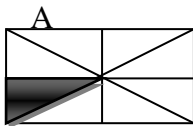
SECTION 2

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

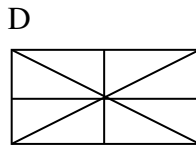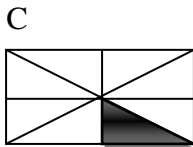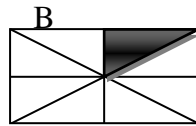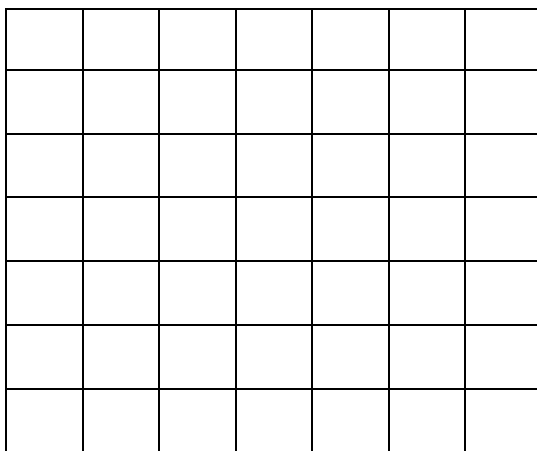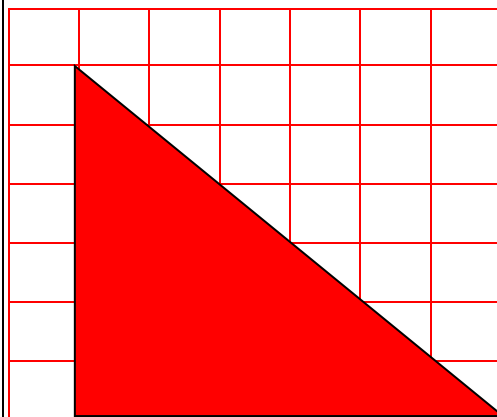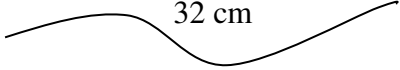| No.	ITEMS	Working Column	
21	Calculate: $4\frac{3}{5}$ + $5\frac{2}{3}$ Answer: _____(2)	$4\frac{3}{5} + 5\frac{2}{3}$ $9\frac{9\ +\ 10}{15} = 9\frac{19}{15}$ $= 10\frac{4}{15}$	
22.	Mary gave John $\frac{2}{5}$ of her stamp and Sita $\frac{1}{3}$ of her stamps. What fraction of her stamps is left? Answer: _____(2)	Gave $= \frac{2}{5} + \frac{1}{3}$ $\frac{6\ +5}{15}$ $= \frac{11}{15}$ Left with $= \frac{4}{15}$	
23.	If $\frac{5}{9}$ of a school's population is 405 pupils, what is the population of the school? Answer: _____(2)	$\frac{5}{9} = 405$ $1 = \frac{405}{1} \text{ x } \frac{9}{5}$ $= 729$ **pupils**	

24.	Sam spent 0.35 of his money to buy a gift and saved the rest.
	
	(i) What fraction of his money did he save?
	
	Answer:
	_____(1)
	
	(ii) If Sam had \$140.00, at first, how much did the gift cost him?
	
	Answer:
	_____(2)
		(a) $1.00 - 0.35 = 0.65$
		    $0.65 = \frac{65}{100}$
		    $\frac{65}{100} = \frac{13}{20}$
		
		    Save $= \frac{13}{20}$
		
		(b) Gift $= \frac{7}{20}$ x $\frac{140}{1}$
		    $= \$ 49$	

25.	Re- arrange the 2, 3, 5 and 4 to form (a) The largest 4-digit number. Answer: _____(1) (b) The smallest 4 digit number that is exactly divisible by 4. Answer: _____(2)	(a) **5432** (b) **3452**	
26.	Harry uses the piece of string shown to make a square. 32 cm (a) What is the length of one side of the square? Answer:_____ (1) (b) What is the area of the square that Harry made? Answer:_____ (2)	(a) Perimeter of square = 32cm Side = 32 ÷ 4 = **8cm** (b) Area of Square = S x S = 8 x 8 = **64 cm²**	
27.	(a) Complete the pattern sequence below for the 5th box.(1) (b)How many dots are needed to make the 7th pattern? Answer:_____(2)	(a) (b) **28 dots**	

28.	A die has one of its faces painted red, two faces white and three faces in green. When the die is thrown, points are awarded according to the colour shown when the die stops.	(a) Carla = (15 x 2) + (1 x 5)

A die has one of its faces painted red, two faces white and three faces in green. When the die is thrown, points are awarded according to the colour shown when the die stops.

Colour	Points
Red	15
Green	10
White	5

(a) Carla threw the die three times and got 2 red and 1 white. How many points did she earn?

Answer:_____(1)

(b) Boyo earned 60 points in the game. Complete the table below to show how many times he got a white when threw the die.

Colour	Number of throws
Red	1
Green	2
white	

Answer:_____ (2)

(a) Carla = (15 x 2) + (1 x 5)
= 30 + 5
= **35 points**

(b) Boyo = 60 points
= (1 x 15) + (2 x 10)
= 15 + 20
= 35

White = (60 – 35) ÷ 5
=   25 ÷ 5
= **5 times**

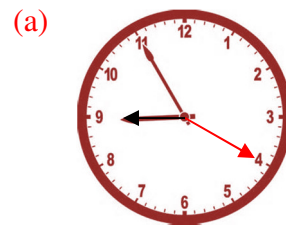29. Laura left home at the time shown on the clock. She arrived at the mall 25 minutes later.

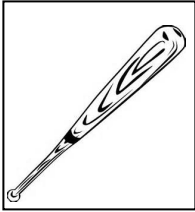(a) On the same clock, indicate the time she arrived at the mall.
Answer:_____(1)

(b) Through what angle, in degrees, did the minute hand move?
Answer: _____(1)

(a)

(b) 1 space = 30^0
5 spaces = 30^0 x 5
= **150^0**

30.	At the factory where Mr. Jerome works, he is paid $40.00 per hour for work up to 30 hours for the week and time and a half for overtime work. Last week, Mr. Jerome worked 45 hours. What should be his pay for last week's work? Answer:_____(3)	Normal time = 30 hrs x \$40 = \$1200 Overtime hours = 45 – 30 = 15 hours Time and a half = $1\frac{1}{2}$ or $\frac{3}{2}$ = $\frac{3}{2}$ x $\frac{40}{1}$ = \$60 Mr. Jerome's overtime= \$60 x15 = \$900 Total Pay = \$ 1200 + \$ 900 **= \$ 2100**	
31.	The drawings below show the cost of three items. $75.00 $35.00 $60.00 Bat Cricket Ball Football (a) Joel has \$300.00. How much does Joel pay for 1 bat and 2 footballs? Answer: _____(1) (b) How many cricket balls can Joel purchase with the REMAINING money? Answer:_____ (2)	(a) Joel pays = \$ 75 + (2 x \$ 60) = \$ 75 + \$ 120 **= \$195** (b) Remained with= \$300 - \$195 = \$105 Cricket balls = \$105 ÷ 35 **= 3 cricket balls**	

32.	Draw lines to match the following nets to their solids.

(3)

33.	Complete Chin's Company pay sheet below for three employees.

5 days wages = $90 x 5
                        = **$ 450**

$ 180 ÷ $ 60 = **3 days**

$ 480 ÷ 6 = **$ 80**

Name	Rate of Pay	Wages
Lee Yong Ling	5 days wages at $90/day	$ [ ]
	[ ] days wages at $60/day	$180.00
	6 days wages at $ [ ] \ day	$480.00
	TOTAL	$1110.00

Answer:_____(3)

34.	The clocks below show the starting time of three plays at different theatres.	(a) **45 minutes**
	A B C	(b) 4th play = 5:15
	(a) How many minutes after the start of each play does the next play begin?	**5th play = 6:00**
	Answer:	
	_____(1)	(c)
	(b) At what time does the fifth play start?	
	Answer:	
	_____(1)	
	(c) Draw the starting time of the 5th play on the clock below.(1)	
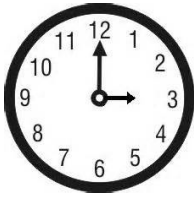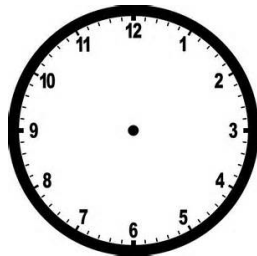
35.		

	5 for $7.00
	
	Mangoes are sold as shown above.
	   (a) How much would a customer pay for 15 mangoes?
	
	Answer:
	_____(1)
	
	   (b) How many mangoes can the customer buy with $49.00?
	
	Answer:
	_____(1)
		(a) 5 mangoes = $ 7
		    1 mango $= \frac{7}{5}$
		    15 mangoes $= \frac{7}{5}$ x $\frac{15}{1}$
		
		        = **$ 21**
		
		(b) $ 7 = 5 mangoes
		    $1 $= \frac{5}{7}$
		    $ 49 $= \frac{5}{7}$ x $\frac{49}{1}$
		      = **35 mangoes**

36		
	Harry and his wife went to a restaurant for dinner. At the end of their meal they received the bill below. VAT is charged at 15%. | ITEM	PRICE
---	---
1 portion of shrimps	$70.00
2 portions of chicken	$80.00
1 portion of fried rice	$30.00
1 portion chunky vegetables	$30.00
2 soft drinks	$30.00
SUB TOTAL	
15% VAT	

TOTAL	|
	
	   (a) Calculate the cost of the meal before VAT was charged.
	Answer:
	_____(1)
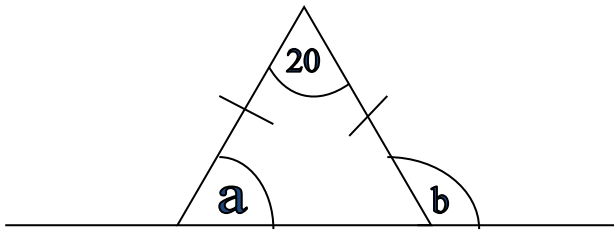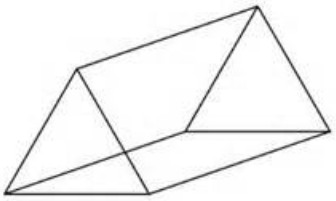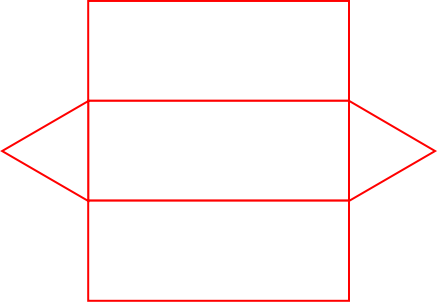	
	   (b) Calculate the cost of the meal after VAT was charged
	
	Answer:
	_____(1)
		(a) Meal before VAT
		
		= $70 + $80 + $30 +$30 + $30
		= **$ 240**
		
		(b) VAT $= \frac{15}{100}$ x $\frac{240}{1}$
		
		    = **$ 36**
		
		Meal After VAT = $ 240 + $ 36
		           = **$276**

37.	Find the value of : a) Angle a. Answer: _____(1) b) Angle b Answer: _____(1)	(a) $a^0 = 180^0 - 20^0$ $= \dfrac{160^0}{2}$ $= 80^0$ (b) $b^0 = 180^0 - 80^0$ $= 100^0$
38	 a) What is the name of the solid above? Answer: _____(1) b) Complete the net of the solid above. 	(a) **Triangular Prism** (b)
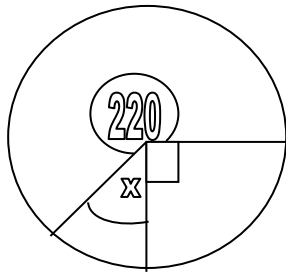
| 39. | In the circle above, state

   (a) The value of angle x in degrees.

Answer:
_____(1)

   (b) The type of angle formed at x

Answer:
_____(1) | (a) $X^0 = 360^0 - (220^0 + 90^0)$
    $X^0 = 360^0 - 310^0$
    $X^0 = 50^0$

(b) **Acute Angle** | |
| 40. | XY is a mirror line.
   (a) Draw the reflection of the figure shown
   (b) Draw another line of symmetry on the
       combined shape formed
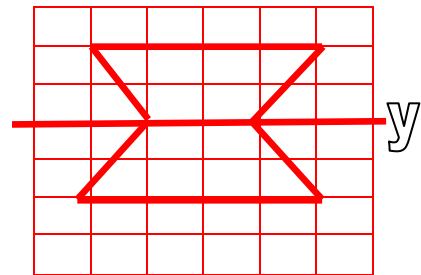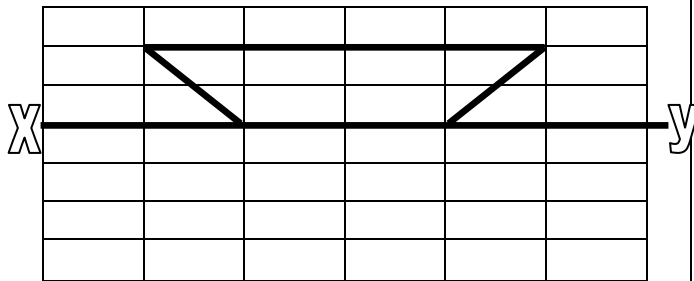
Answer:
_____(2) | | |

SECTION 3

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

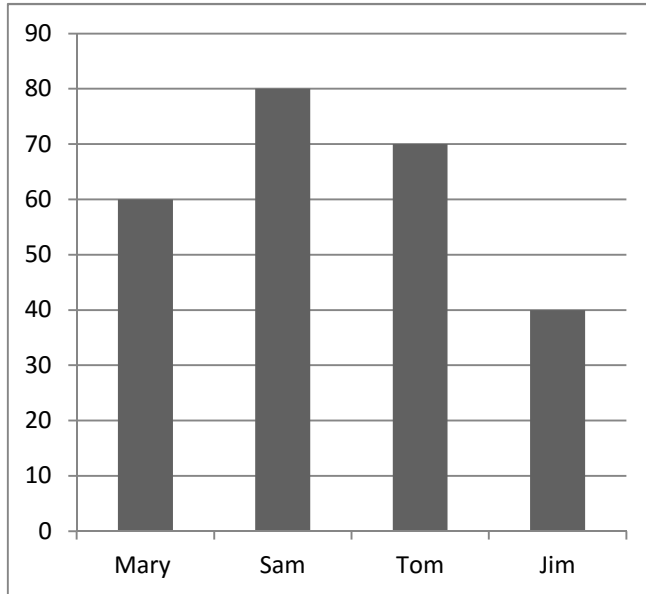| NO	ITEMS	WORKING COLUMN	
41	In a cricket match between two schools, School A scored 200 runs while School B scored 195 runs. (a) What is the total number of runs scored by both teams? Answer:_____ (1) (b) What is the mean number of runs scored by the two teams? Answer:_____(2) (c) Kyle, who was a member of School A's team, scored 45 runs. What percent of his team's total score did Kyle score? Answer: _____(2)	(a) Total runs = 200 + 195 **= 395 runs** (b) Mean = $\dfrac{395}{2}$ **= 197.5 runs** (c) Percentage of total score $= \dfrac{45}{200} \times \dfrac{100}{1}$ **= 22.5%**	
42.	Mrs. Laura wants to tile her living room floor, which measures 12 metres by 9 metres with square tiles of sides 30 centimetres. (a) What is the area of one of the tiles? Answer:_____(1) (b) How many tiles would Mrs. Laura have to buy to cover the whole floor? Answer:_____(2) (c) What will be the cost to tile the floor if one tile costs $9.00 and labour was charged at $2.00 per tile? Answer:_____(2)	(a) Area of tile = 30 x 30 = 900 tiles (b) Floor = 12m = 1200cm = 9m = 900cm (c) Tiles needed= $\dfrac{\cancel{1200}^{40} \times \cancel{900}^{30}}{\cancel{30}_1 \times \cancel{30}_1}$ **= 1200 tiles** (d) 1 tile = $11 ($9 + $2) 1200 tiles = $ 11 x 1200 **= $13 200**	

55

43.	The cost price of a television set is $6400 and the selling price is $8000. Calculate		
	(a) The profit Answer: _____(1)	(a) Profit = S.P – C.P = $ 8000 - $ 6400 = **$ 1600**	
	(b) The percent profit? Answer:_____ (1)	(b) Percentage Profit $= \frac{1600}{6400} \times \frac{100}{1}$ = **25%**	
	(c) A discount of 20% is given on the selling price. What is the value of the discount? Answer: _____(1)	(c) Discount $= \frac{20}{100} \times \frac{8000}{1}$ = **$ 1600**	
	(d)The customer has to pay 15% Vat on the sale price. How much did the television set finally cost him? Answer:_____(2)	(d) S.P = $ 8000 - $ 1600 = $ 6400 Final cost = 115% x $ 6400 $= \frac{115}{100} \times \frac{6400}{1}$ = **$ 7360**	

44.	A farmer harvested 640 carrots from his garden. He threw away 10% which was spoilt, gave his neighbours $\frac{1}{4}$ of the remainder and then sold the rest. Calculate the number of carrots:
	
	  (a) He threw away
	
	Answer:_____ (1)
	
	  (b) He gave the neighbours
	
	Answer:
	_____ (2)
	
	(c) He sold
	Answer:
	_____(2)
		(a) Harvested = 640 carrots
		   Spoilt = $\frac{10}{100}$ x $\frac{640}{1}$
		   = 64 carrots
		
		(b) Remainder = 640 – 64
		           = 576
		  Neighbours = $\frac{1}{4}$ x $\frac{576}{1}$
		      = 144 carrots
		
		(c) Sold = 640 – (64 + 144)
		      = 640 – 208
		      = 432 carrots	

45.	Jack borrowed $10,000.00 for 5 years at an interest rate of 8% per annum from a bank.
	
	Calculate:
	  a) The simple interest for one year
	
	Answer:
	_____(2)
	
	  b) The simple interest for five years
	
	Answer:
	_____(1)
	
	  c) The amount he has to repay after five years.
	
	Answer:
	_____(1)
	
	  d) His monthly installments to the nearest dollar
	
	Answer:
	_____(1)
		(a) S.I = $\frac{P \ x \ R \ x \ T}{100}$
		   = $\frac{10\ 000 \ x \ 1 \ x \ 8}{100}$
		 = $ 800
		
		(b) Five Years = $ 800 x 5
		          = $ 4 000
		
		(c) Amount = $ 10 000 + $ 4000
		        = $ 14 000
		
		(d) Monthly Installments= 12 x 5
		         = 60 months
		
		M. I = $\frac{Amount}{No. \ of \ mths}$
		   = $\frac{\$ 14\ 000}{60}$
		   = $ 233.33
		   = $233 (to nearest dollar)	

46	The bar chart below shows four children's scores in a Mathematics test.	(a) **Tom**	

		(b) Difference = 80 – 40
		
		    = 40 marks
		
		(c) Sum of Scores
		   = 60 + 80 + 70 + 40
		   = 250 marks
		
		(d) Mean = $\dfrac{250}{4}$
		   = 62.5 marks
		
		(e) Tom = $\dfrac{70}{250}$
		
		   = $\dfrac{7}{25}$	

	(a) Which child scored 70 marks? Answer: _____(1) (b) What is the difference between the highest and the lowest scores? Answer: _____(1) (c) What is the SUM of the children's scores? Answer: _____(1) (d)What is the mean score of the four pupils? Answer: _____(1) (e) What fraction of the total score is Tom? Answer: _____(1)		
	End of Test 3		