

## Mathematical Literacy 3 - Module 1 Summative Assessment

Name: .....

Marks Available: 50

Time: 45 minutes

### Question 1:

Choose the correct answer:

- $\frac{3}{7}$  expressed as a percentage is:
  - 233.33%
  - 42.86%
  - 2.33%
  - 0.429
- Jet offers a 25% discount on selected clothes. A shirt that costs R150 will now cost:
  - R37.50
  - R120
  - R30
  - R112.50
- If 62.5% of a class of 24 passed. How many learners passed?
  - 12
  - 13
  - 14
  - 15
- The calculation:  $(7 \times 3 + 2 \times 3 + 1) \div (20 \div 2 + 4)$ 
  - 3.57
  - 2
  - 10
  - 42
- If the conversion for Celsius to Fahrenheit is  $C = \frac{5}{9}(F - 32)$  then  $0^\circ\text{C}$ 
  - $28^\circ\text{F}$
  - $30^\circ\text{F}$
  - $32^\circ\text{F}$
  - $34^\circ\text{F}$

**Question 2**

Give the meaning of each of the following terms:

- 1. Perimeter  
.....
- 2. SI measurements  
.....
- 3. Recurring decimal fractions (give an example)  
.....
- 4. Mixed number (give an example)  
.....
- 5. Equivalent fractions (give an example)  
.....

[10]

**Question 2#**

*Calculate the following:*

- 1.  $7 \times (3 + 2) =$ .....
- 2.  $8 + \frac{1}{2}$  of 50 = .....
- 3.  $28 \div 7 - 3 \times 4 =$  .....

[6]

**Question 3**

*Using the formula to calculate a measurement:*

- 1. The simple interest on loan of R5000 if the interest rate is 15% and term is 6 years  
.....  
.....  
.....
- 2. The area of a circle If the radius is 7cm  
.....  
.....  
.....

3. The temperature in Fahrenheit if the temperature in Celsius is 50 ° C

.....  
.....  
.....

[6]

**Question 4**

A building company recommends that you mix 2 wheelbarrows of sand, 2 wheelbarrows of stones and 2 bags of cement for a high strength building foundation. Assume that a bag of cement weighs 40kg and each wheelbarrow can carry 200kg of cement and stones.

1. Translate this ratio into kilograms (6)

.....  
.....  
.....

2. Calculate the amount of each substance needed to create 30t of cement mix. (6)

.....  
.....  
.....

3. If it is recommended that you need 3000 bricks, 3.3m<sup>3</sup> of sand and 13.2 bags of cement to build a wall with a surface area of 60m<sup>2</sup>, calculate the number of bricks required, the volume and sand and the number of bags of cement needed to build 1 m<sup>2</sup> of wall. (6)

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.....  
.....

[18]

[50]

## Mathematical Literacy 3 - Module 2 Summative Assessment

Name: .....

Marks Available: 50

Time: 45 minutes

### Question 1:

*State the meaning of the following terms:*

1. Income

.....

2. Expenses

.....

3. Current Account

.....

4. Source Document

.....

5. Hire Purchase Contract

.....

[10]

### Question 2:

*Case study: Mary-Jane runs a shop that repairs watches. She is given a Timex Ironman by a Mr T. Smith to repair. The watch strap needs to be replaced for R200 and the battery for another R49. The invoice is no 657.*

1. Complete the invoice and calculate the VAT. (5)

TAX INVOICE		NO: _____	
FROM: Mary-Jane's Watches 23 Springbok Road Welkom	VAT registration no.:		
TO : _____			
DATE: _____ Watch Make: _____ Model: _____			
Labour (A)	Materials (B)	R	c
Total:			
Labour:		Total	
Total ( A & B)		SUB	
VAT:			
GROSS AMOUNT:			

2. The customer pays the amount by cheque when collecting the watch. Complete the cheque and invoice and cheque stub. (5)

<b>BEST BANK</b>	101-923				
Ltd Reg no. 1961/0004/06	Date: _____				
SHONGOLO Main Road					
Pay _____	or bearer				
Amount _____					
	<table border="1" style="float: right; border-collapse: collapse;"> <tr> <td style="width: 50%;">R</td> <td style="width: 50%;">c</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	R	c		
R	c				
	T. Smith				
	_____				
	T. Smith				
0065 2024 1175 245324 09					

Date: \_\_\_\_\_

To: \_\_\_\_\_

For: \_\_\_\_\_

Balance brought forward	
Deposits	
Total	
This cheque	
Sub-total	
Withdrawals	
Balance carried forward	

0065

3. Complete the deposit slip of R5630 for cash received during the week by the shop. (4)

**BEST BANK** Deposit slip Date (ddmmyyyy): \_\_\_\_\_

Branch: \_\_\_\_\_

Credit: (name in block letters) \_\_\_\_\_

Depositor's signature: \_\_\_\_\_

Account no to credit: \_\_\_\_\_

	Rand	cents
Cash		
Cheques:( name of drawer/branch code/bank)		

Depositor's contact no. \_\_\_\_\_ Total amount: \_\_\_\_\_

[14]

**Question 3:**

Calculate the interest on R18 500 in a fixed deposit at 9% for 4 years. Calculate the compound interest on an annual basis.

.....

.....

.....

.....

**Question 4**

1. Compile an income statement for Sandra’s Bakery based on the following information. (8)

- Sales R14 400
- Labour R4 000
- Flour, yeast and other inputs R3 000
- Rental R2 000
- Water and electricity R800
- Tax is charged at 30% on Profit


2. Sandra has budgeted the following:

- Sales R12 000
- Input costs R2 500
- Rental R2 000
- Water and electricity R700

Calculate her budget variance (you can do it on the income statement above) (8)

3. What three things can income statements be judged against? (3)

.....

.....

.....

## Mathematical Literacy 3 - Module 3 Summative Assessment

Name: .....

Marks Available: 50

Time: 45 minutes

### Question 1:

*A business has fixed costs of R1000 and variable costs of R500 for every R1000 of sales.*

1. What kind of a relationship is this? (1)

.....

2. If the business sells R4 000 of goods, what is its total costs? (3)

.....

.....

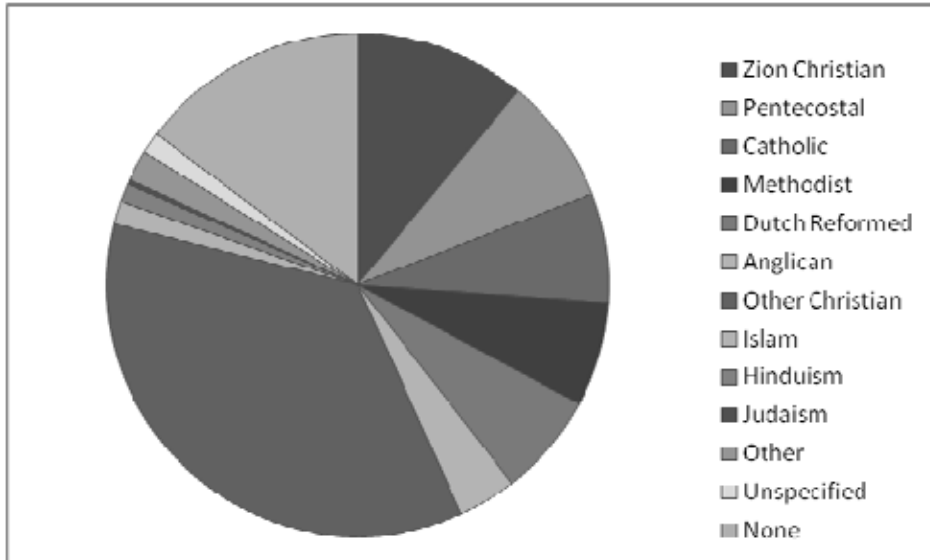
3. Draw the graph of the equation. (6)

[10]



**Question 2:**

Study the pie chart on religions in South Africa and answer the questions that follow (the categories start at the top and move in a clockwise direction so that Zion Christian is at 12:00 while Pentecostal is around 1:00)

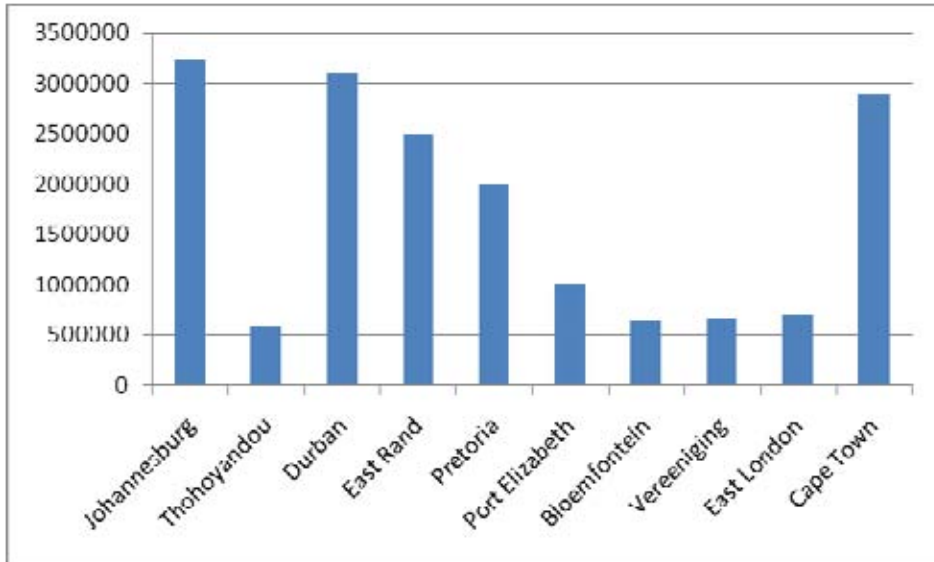


1. What is the largest religion? Approximately what percentage does this represent?  
(3)  
.....  
.....
2. What is the smallest represented religion? (1)  
.....
3. How many religions are represented in the pie chart? (2)  
.....
4. Approximately what % are atheist (have no religion)? (2)  
.....

[10]

**Question 3**

Study the bar graph of the population of various towns in South Africa and answer the questions that follow:



1. Decide on an appropriate title for the bar graph. (1)

.....

2. Arrange the towns from largest to smallest (3)

.....

.....

3. Approximately what fraction of Johannesburg's population does Vereeniging have? (4)

.....

.....

4. Estimate the total population in these ten cities combined. (4)

.....

.....

.....

.....

[12]

**Question 4**

*Plot the following points*

- 1. (1; 3)
- 2. (-1; 4)

[4]

**Question 5**

Calculate the following:

- 1. Simple interest if the Principle = R3 000; time = 6 years and the interest rate is 15% (4)

.....  
.....  
.....  
.....

- 2. The time taken for a trip if the speed is 100km/h and the distance is 450km. (4)

.....  
.....  
.....  
.....

- 3. If a pool has a volume of  $400\text{m}^3$ , what is its depth if its length is 20m and is breadth is 10m. (4)

.....  
.....  
.....  
.....

[12]  
[50]

## Mathematical Literacy 3 - Module 4 Summative Assessment

Name: .....

Marks Available: 50

Time: 45 minutes

### Question 1:

*Give the meaning of the following terms:*

1. Cone

.....

2. Concentric Circles

.....

3. Projection lines

.....

4. Isometric sketch

.....

5. Perspective drawing

.....

[10]

### Question 2

*Sketch the following shapes:*

1. Hexagon

2. Octagon

3. Cylinder

4. Parallelogram

[8]

**Question 3**

*Calculate the area of the following:*

1. A trapezoid with coordinates:  $(8; 0)$ ;  $(0; 0)$ ;  $(3; 2)$ ;  $(6; 2)$  (5)

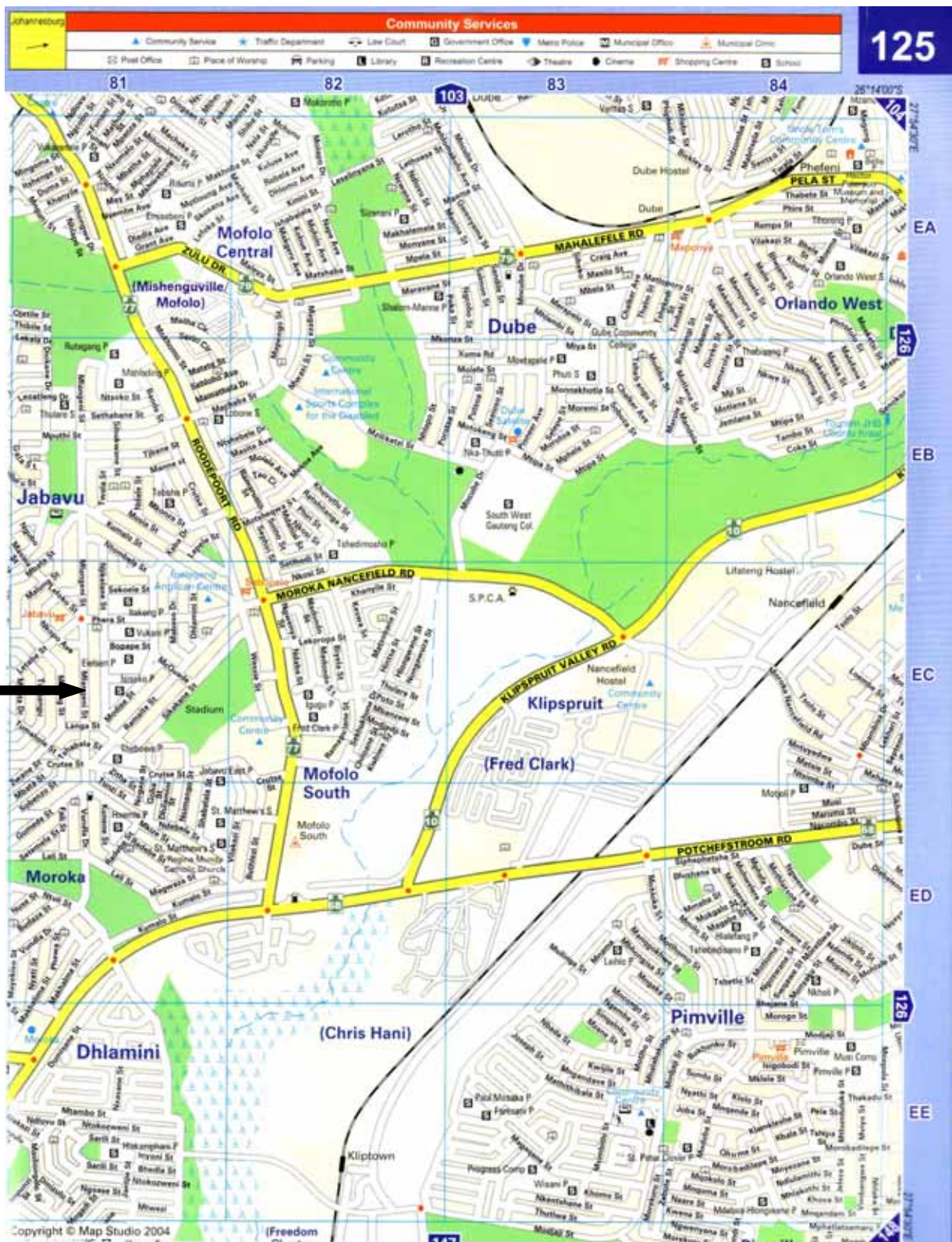
2. A triangle with dimensions  $(-2; 3); (4; 6); (4; -2)$

(5)

[10]

**Question 4**

*Study the map and answer the questions that follow (1 side of the grid represents approx 850m)*





Nomsa and her daughter, Thandi live at Mangeni Street (marked on the map). Nomsa has a car which she parks at the station every day on her way to work. Thandi studies at South West Gauteng College.

1. Measure the distance to South West Gauteng College (as the crow flies). (2)  
.....
2. Measure the distance to Kliptown and Nancefield stations from the house (as the crow flies). (4)  
.....  
.....
3. How far is to drive from home to the college? Draw your route on the map. (4)  
.....  
.....
4. On days that Nomsa doesn't drop Thandi off at college, is it shorter to drive to Nancefield or Kliptown station. Explain your answer. (6)  
.....  
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.....  
.....

[16]

**Question 5**

Draw an isometric drawing of a cube of sides 3cm

[6]

[50]

## Mathematical Literacy 3 - Module 5 Summative Assessment

Name: .....

Marks Available: 50

Time: 45 minutes

### Question 1:

On Saturday 8<sup>th</sup> August 2009, the Springboks played the Wallabies. The test line up of each team was as follows with the number of tests played next to the player's name.

Springboks		Wallabies	
Frans Steyn	32	Adam Ashley-Cooper	27
JP Pieterse	28	Lachie Turner	6
Jacque Fourie	47	Stirling Mortlock	79
Jean de Villiers	50	Berrick Barnes	17
Bryan Habana	50	Drew Mitchell	31
Morne Steyn	5	Matt Giteau	68
Fourie du Preez	48	Like Burgess	15
Pierre Spies	24	Wycliff Palu	29
Heinrich Brüssow	6	George Smith	100
Juan Smith	59	Richard Brown	8
Victor Matfield	85	Nathan Sharpe	77
Bakkies Botha	59	James Horwell	14
John Smit	86	Al Baxter	67
Bismark du Plessis	26	Stephen Moore	36
Tendai Mtawarira	15	Benn Robinson	21

1. Calculate the mean number of test played of the Springboks and then the Wallabies. Comment. (8)

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2. Calculate the medians of each team. Comment (6)

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.....  
.....  
.....

3. Calculate the modes of both teams. Comment. (6)

.....  
.....  
.....  
.....

4. What can you gather about the experience of the players in each team?  
Comment critically. (6)

.....  
.....  
.....  
.....

[26]

**Question 2**

Suppose we want to predict a learner’s mark in the final exam based on his class work.  
We gather the data for 12 learners.

61	39	70	63	83	75	48	72	54	22	67	60
83	62	76	77	89	74	48	78	76	51	63	79

1. Draw the points on a scattergraph (8)

2. Draw a line of best fit (2)

3. Where does your line of best fit cross the y-axis? What does this tell you? (4)

.....  
.....  
.....  
.....

4. What can you predict about that learner who achieved a 50% year mark might achieve for the exam. (2)

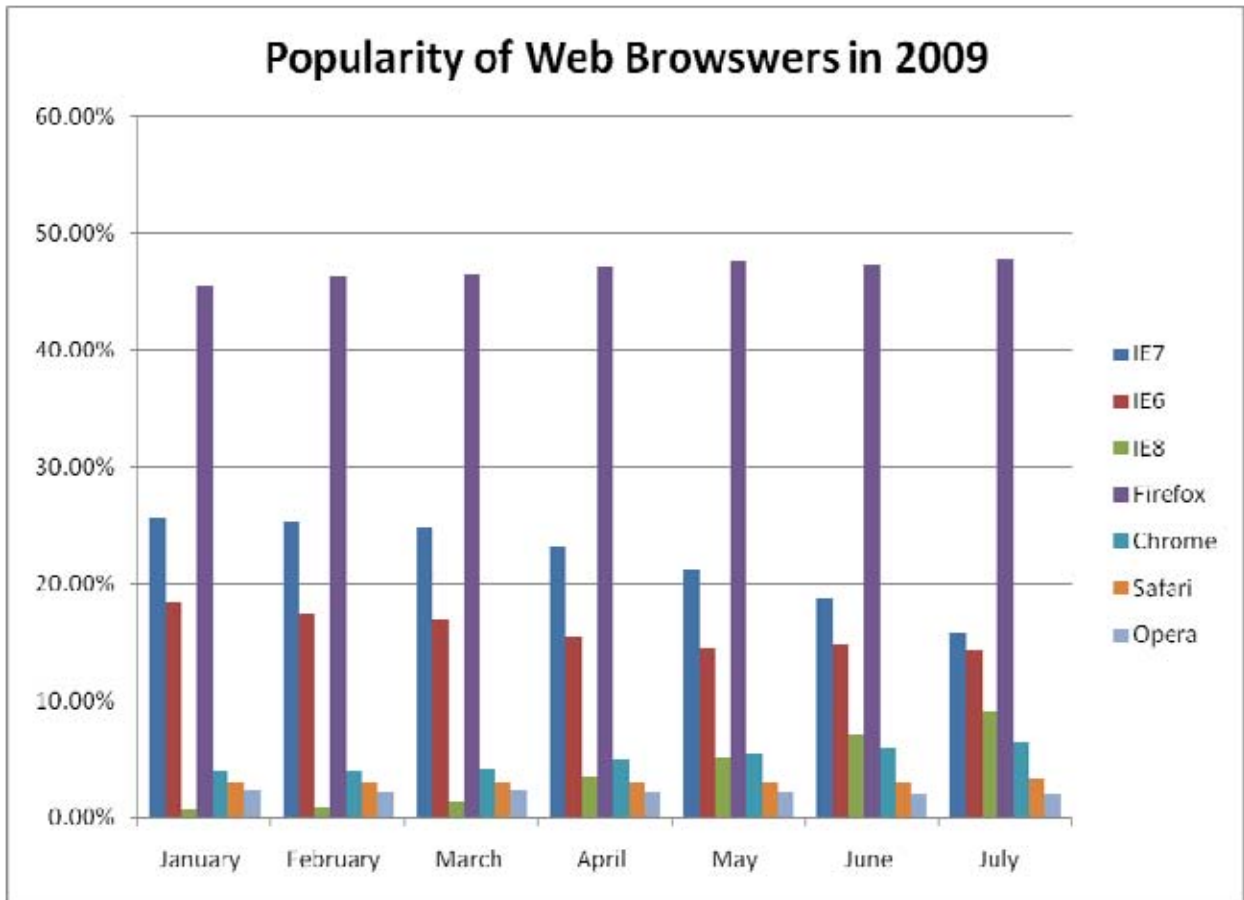
.....  
.....

5. Do you think this is an accurate prediction? Why or why not? (4)

.....  
.....  
.....  
.....

[20]

### Question 3



Study the bar graph and answer the questions that follow (IE7 is the left most bar and Opera is the rightmost bar) (source: w3schools.com):

- Which is the most popular web browser listed? (2)  
.....
- Which is the least popular web browser? (2)  
.....
- Name two browsers that are decreasing in popularity and three that are increasing in popularity. (5)  
.....  
.....  
.....
- Draw a pie chart of the relative usage of the browsers in July. (10)

[19]  
[50]