

Test 1**Essential Maths Book 7C Units 1 & 2**

No calculators

-
1. a) Work out $29 + 342 + 5067$ (1 mark)

- b) Copy and complete these calculations

i)

$$\begin{array}{r} \square \quad 7 \quad \square \\ + \quad 4 \quad \square \quad 6 \\ \hline 8 \quad 0 \quad 1 \end{array}$$

(2 marks)

ii)

$$\begin{array}{r} 6 \quad \square \quad 6 \\ - \quad \square \quad 5 \quad \square \\ \hline 3 \quad 8 \quad 4 \end{array}$$

(2 marks)

-
2. a) Write in a more simple form

i) $5n + 3n + m$ (1 mark)

ii) $8a + b - 3a + 2b$ (1 mark)

- b) Here is a formula involving p and n .

$$p = 6n - 10$$

Find the value of p when $n = 12$ (1 mark)

-
3. The numbers below go up in equal steps.
Find the missing numbers.

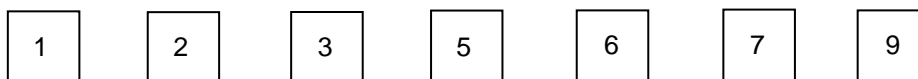
$\square \quad \square \quad 7 \quad \square \quad 13 \quad \square \quad 19 \quad \square \quad \square$ (2 marks)

-
4. a) Work out $\frac{3}{5}$ of £20 (1 mark)

- b) Work out $\frac{3}{4}$ of £36 (1 mark)

- c) Work out $\frac{1}{2} + \frac{2}{5}$ (1 mark)

5. Look at the cards below



- a) Use four of the cards to make a *pair of equivalent fractions*

$$\frac{\square}{\square} = \frac{\square}{\square}$$

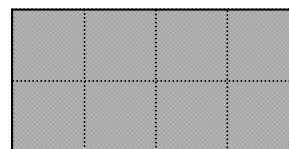
(1 mark)

- b) Use four of the cards to make a *different* pair of equivalent fractions

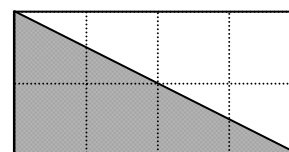
(2 marks)

6. The grids in this question are centimetre square grids.

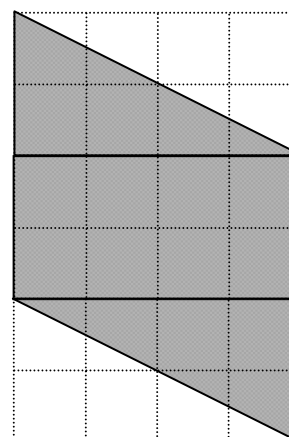
- a) What is the area of this shaded rectangle?



- b) What is the area of this shaded triangle?



- c) What is the area of this shaded shape?



- d) What is the *name* of this shaded shape?

(4 marks)

7. Azmi is trying to find a number in a computer game.

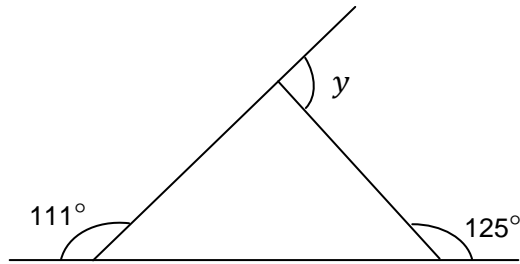
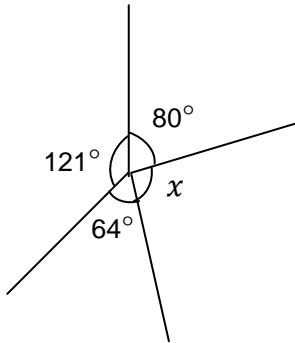
The number is more than 5.2

The number is less than 5.3

Write a number that Azmi could write that matches these conditions

(1 mark)

8. Work out the size of angles x and y



(3 marks)

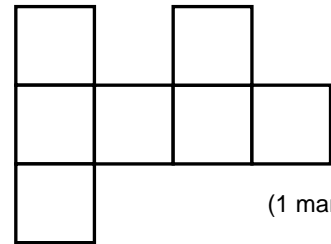
9. A lorry uses an average of 124 litres of fuel per day.

How much does the lorry use in 26 days?

(2 marks)

10. The shape here is made with centimetre squares.

(Diagram is not to scale)



- a) Write down the area of the shape.

(1 mark)

- b) Write down the perimeter of the shape.

(1 mark)

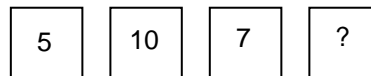
- c) Draw a shape made with centimetre squares which has an area of 6cm^2 and a perimeter of 14cm.

(2 marks)

11. a) Find the *median* of the numbers 6, 11, 3, 14, 11, 8, 5

(1 mark)

- b) Here are four number cards.



The *mean* is 7.

What is the missing number?

(2 marks)

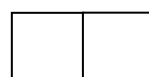
12. Here are four number cards



Use the four number cards to make the answer to the calculation as **large** as possible.



+



(2 marks)

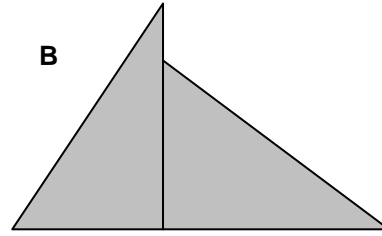
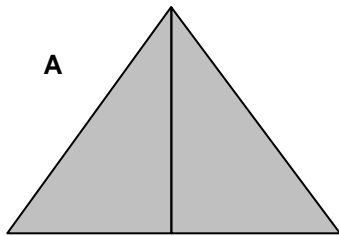
13. The two shapes below are made from right-angled triangles with sides 6cm, 8cm and 10cm.

a) Find the *area* of shape A

(1 mark)

b) Find the *perimeter* of shape B

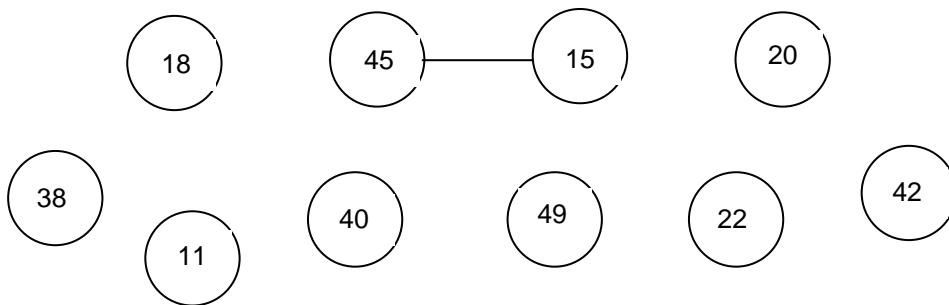
(2 marks)



14. Copy the diagram below.

Draw lines to join every pair of numbers that add to make 60.

One is done as an example.



(2 marks)

15. Find the missing number in each calculation

a) $\frac{\square}{4}$ of 40 = 10

(1 mark)

b) $\frac{2}{\square}$ of 9 = 6

(1 mark)

c) $\frac{1}{10}$ of \square = 8

(1 mark)

16. Work out each of the following.

a) two hundred and sixteen add five hundred and sixty eight

(1 mark)

b) 1001 - 820

(1 mark)

c) 252 ÷ 7

(1 mark)

d) 36 ÷ (11 - 2)

(1 mark)

17. The diagram shows part of a number grid

Copy the diagram and fill in the missing numbers.

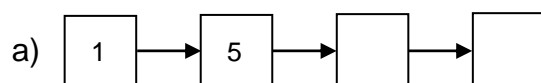
632	633		
622			625
	613		

(3 marks)

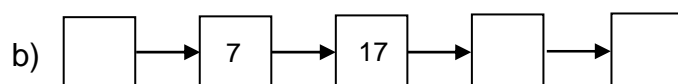
18. The rule for the number sequences below is

'double and add 3'

Copy each sequence and find the missing numbers

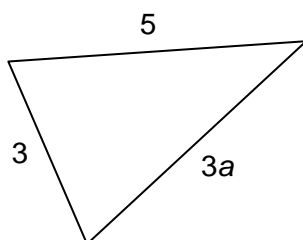


(1 mark)



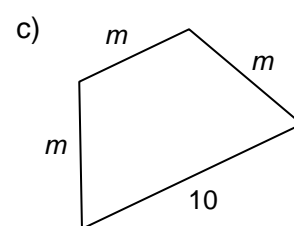
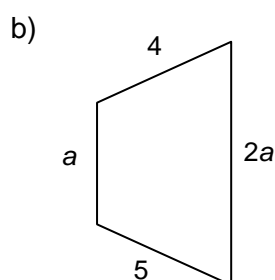
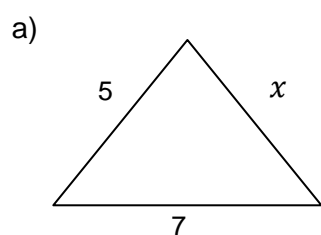
(2 marks)

19. An expression for the **perimeter** of this shape is $\text{perimeter} = 3a + 8$



Write an expression for the perimeter of the shapes below.

Write the answer in its simplest form.



(3 marks)

20. a) Write two different fractions that are less than 1 but greater than $\frac{1}{3}$. (2 marks)
 b) Simplify the fractions as far as possible

i) $\frac{10}{15}$ ii) $\frac{28}{42}$

(2 marks)