SECONDARY SCHOOL ANNUAL EXAMINATIONS 2008
DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Educational Assessment

B

FORM 2 **MATHEMATICS – SCHEME B** **TIME: 45 minutes**
(Non-Calculator Paper)

Question	1	2	3	4	5	6	7	8	9	10	11	**TOTAL**
Mark												

DO NOT WRITE ABOVE THIS LINE

Name: _____ **Class:_____**

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**
- **This paper carries 40 marks.**
- **Calculators and protractors are not allowed.**

1. Work out. Give the answer as a **decimal**.

(a) 4×0.01

_____

(b) $9.3 \times \frac{1}{1000}$

_____

(c) $\frac{7}{100}$

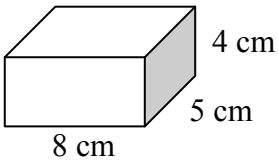
_____

(d) $\frac{1}{3}$

_____

(8 marks)

2.



(a) Calculate the **volume** of the cuboid.

_____cm^3

(b) Calculate the **area,** in cm^2, of one of the **largest** faces.

_____cm^2.

(4 marks)

3.

A table is marked €48.
Ms Galea buys this table. She is given a 25% **discount**.

(a) How much does she **save**?

€_____

(b) How much does she **pay** for the table?

€_____

(4 marks)

4. €30 is shared **equally** among 9 children.
How much does each receive?
Give the answer correct to the **nearest cent**.

€_____

(2 marks)

5. Write an **approximate** answer for this question (show your working).

$$\frac{571}{3.04}$$

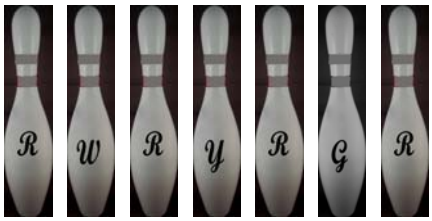
_____

(2 marks)

6. Fill in:

$$\square + \boxed{-6} = \boxed{-2}$$

(2 marks)

7. 

Michael throws a ball and hits one pin.

What is the probability that he hits a **red**(R) pin?

_____

(2 marks)

8. **Simplify** the ratio:

450 *ml* : 1 *litre*

_____

(2 marks)

9. During a local football league

the **PANDAS** got
- 6 wins (***w***)
- 5 draws (***d***)
- 4 losses (***l***)

(a) Write an **expression** for the score of the **PANDAS** in ***w***, ***d*** and ***l***.

_____

The score was

(+ 4) points for a **win** (+ 2) points for a **draw** (− 4) points for a **loss**.

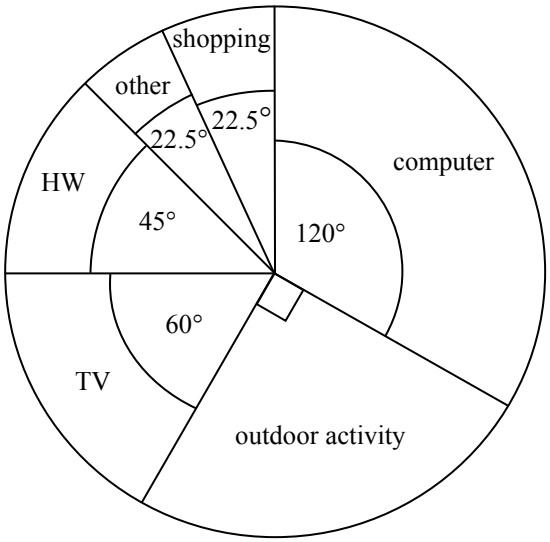
(b) Work out the **PANDAS' total** score.

_____ points

(4 marks)

10. Maria asked **24** classmates how they spent last Saturday morning.

She drew this pie chart to show the information.



(a) What **fraction** of her class took part in outdoor activities?

_____

(b) How many classmates, **altogether**, watched TV **and** used the computer?

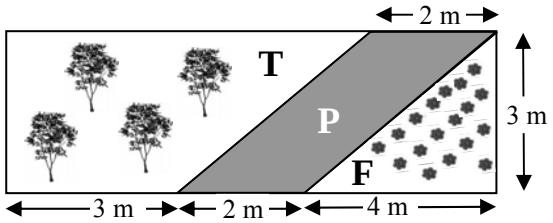
_____ classmates

(c) How did $\frac{1}{8}$ of her classmates spend the morning?

_____

(4 marks)

11.



The Pace family have a rectangular garden, 3 m wide and 9 m long.
Mr Pace lays a path, in the form of a **parallelogram**, 2 m wide at both ends as shown above.

(a) Find the area of the **path** (P).

_____ m^2

(b) Ms Pace plants flowers in the **triangular** part.
Find the area of the **flower bed** (F).

_____ m^2

(c) Mr Pace plants trees on the other side of the path.
What is the area of the **"tree" part** (T)?

_____ m^2

(6 marks)

END OF PAPER

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2008
DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Educational Assessment Unit

B

FORM 2 **MATHEMATICS – SCHEME B (MAIN PAPER)** **TIME: 1h 15min**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Main	NC	**Total**

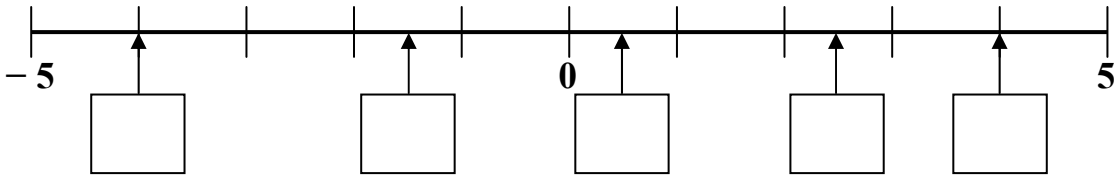
DO NOT WRITE ABOVE THIS LINE

Name: _____ **Class:**_____

- **Answer all questions.**
- **This paper carries 60 marks.**
- **Calculators and protractors are allowed but all necessary working must be shown.**

1. 4 −1.5 2.5 0.5 − 4

Use the above numbers to **fill in** the boxes below.



(3 marks)

2. One morning Ms Scerri weighed the schoolbag of each of **5** students:

6.430 kg	4990 g	6 kg 60 g	5.095 kg	5000 g

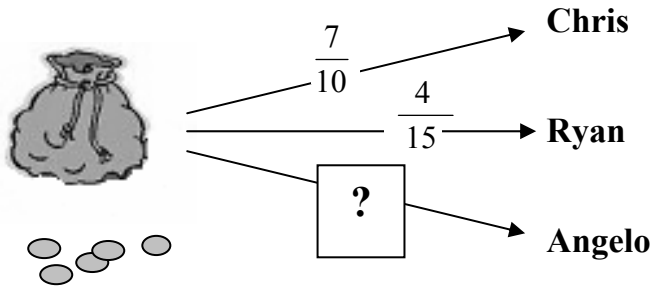
(a) Arrange these weights in order of size, smallest first.

(b) What is the **median** weight?

_____

(3 marks)

3. Ryan **shares** some flip disks.

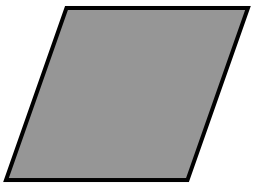


What **fraction** of the discs does Angelo take?

_____

(2 marks)

4. **Circle** the correct answer: **TRUE** or **FALSE**.
(The first one is done for you)



(a) This shape is a **rhombus**. **TRUE** / **FALSE**

(b) It has **4** equal sides. **TRUE** / **FALSE**

(c) It has **only** one pair of equal angles. **TRUE** / **FALSE**

(d) It has **both** line and rotational symmetry. **TRUE** / **FALSE**

(2 marks)

5.

1st 2nd 3rd

(a) Draw the **4th** diagram in the sequence.

(b) Complete the table.

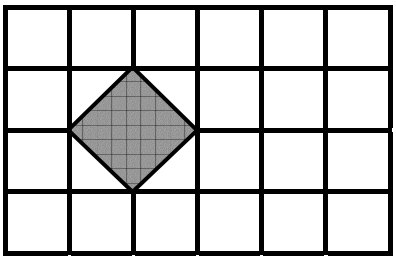
Diagram number	1	2	3	4	5	8
Number of triangles	1	3				

(4 marks)

Name: _____ **Class:**_____

B

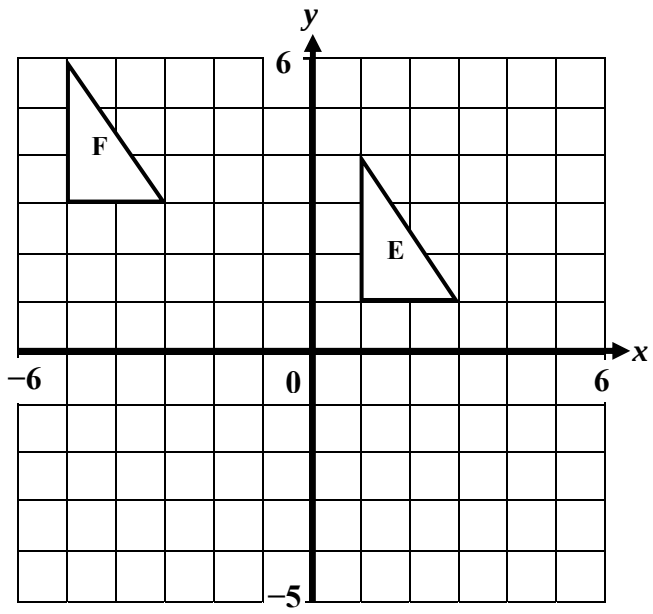
6.



Add at least **6** more similar shapes to show that the shape tessellates.

(2 marks)

7.



(a) **Describe** the transformation that maps **E** to **F**.

_____

_____.

(b) Draw the **reflection** of **E** in the *x*-axis. Label it **G**.

(c) Draw the **reflection** of **G** in the *y*-axis. Label it **H**.

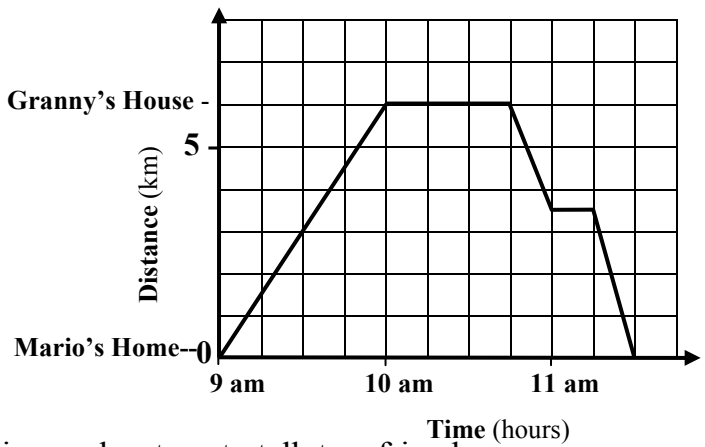
(d) **Describe** the single transformation that maps **E** to **H**.

It is a _____ of _____°

about _____.

(6 marks)

8. Mario leaves home at 9 am to walk to his granny's house. The graph shows his journey.



(a) How **far** does he walk to arrive at his granny's house?

_____km

(b) How l**ong** does he stay at her house?

_____minutes

(c) Mario cycles **back home.** On his way he stops to talk to a friend. How **far from home** is Mario when he meets his friend?

_____km

(3 marks)

9. (a) Express 24 as a product of its prime factors.

_____

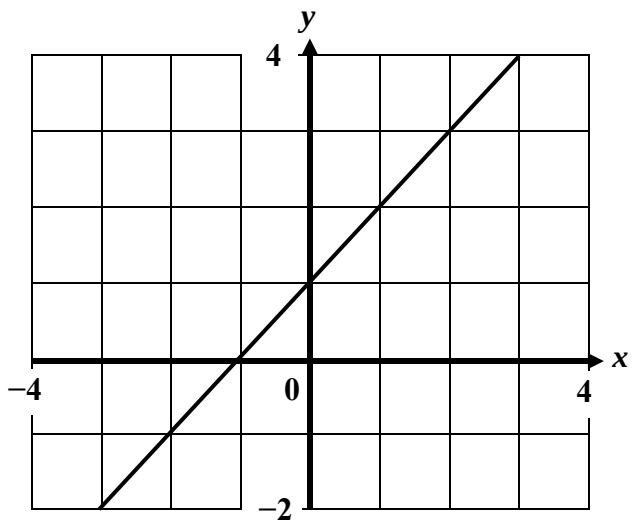
(b) (i) Write the first 3 multiples of 9. ____ ____ ____

(ii) Write the first 3 multiples of 6. ____ ____ ____

(iii) What is the LCM of 9 and 6? _____

(5 marks)

10.



(a) **Fill in** the **missing** co-ordinates for the line graph shown:

(−3, −2)

(−1, 0)

(0, ___)

(___, ___)

(b) Which of the following is the **equation** of the line?

$y = x + 3$
$y = x + 1$
$y = x - 1$

_____

(3 marks)

11. Marisa asked her friends how long (in minutes) they spent reading last night.

10 min	**20 min**	**25 min**
15 min	**20 min**	**10 min**
25 min	**45 min**	**50 min**
55 min		

Marisa grouped the data. This is shown in the table below.

Time in minutes		
At least	Below	Frequency
10	20	3
20	30	4
30	40	1
40	50	1
50	60	2

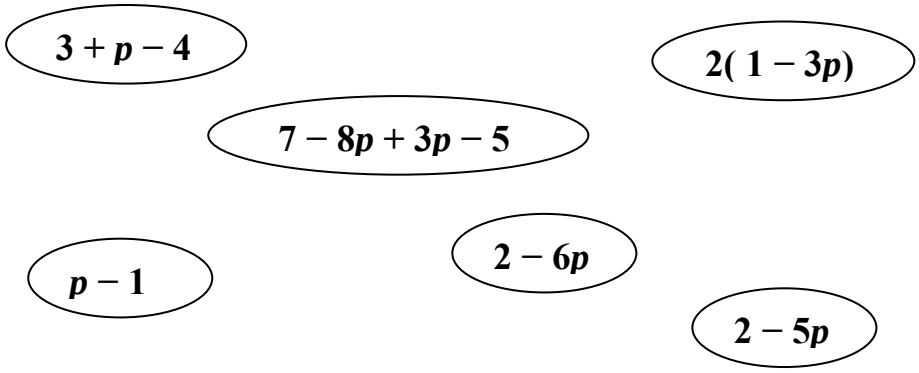
(a) She made **one mistake** in the table. Cross it out and write the **correct** answer.

(b) How many friends said they read for 40 minutes **or more**, last night?

_____

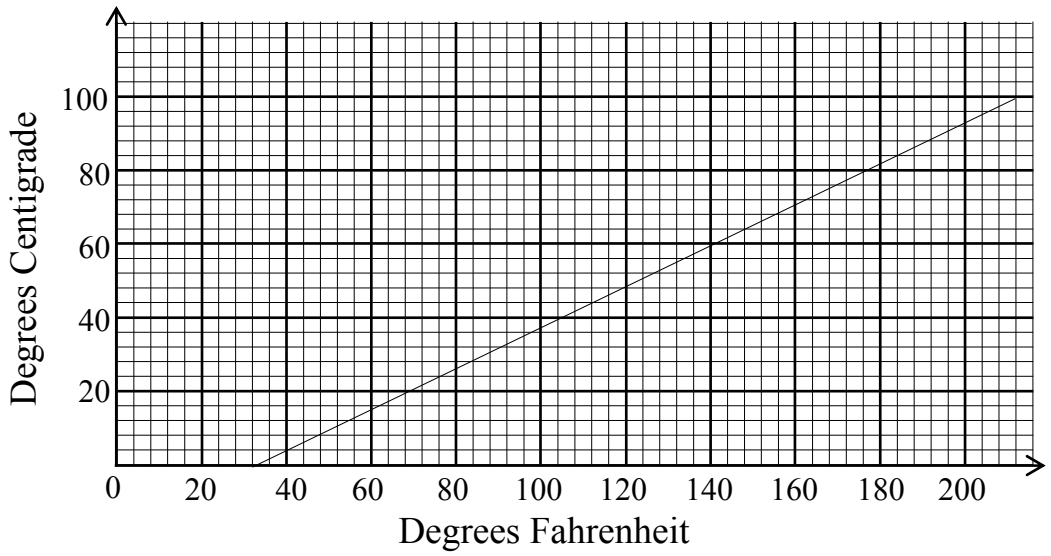
(2 marks)

12. **Match** the following to form three pairs.



(3 marks)

13.



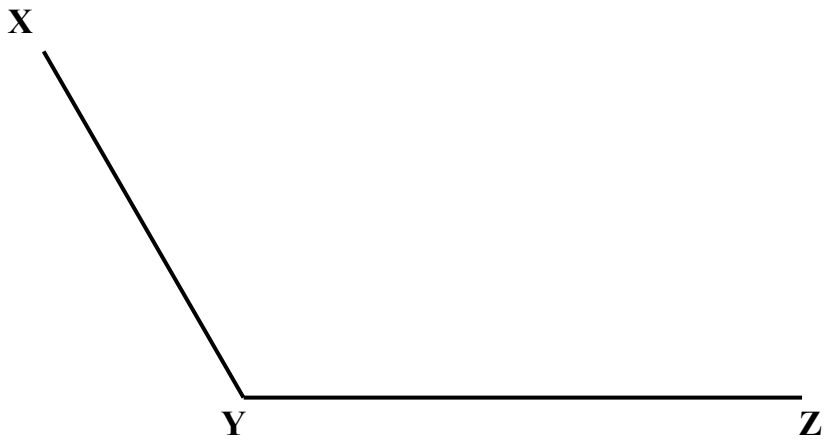
Use the graph to fill in:

(a) One small square represents ____degrees.

(b) 20°C = ___°F (c) 100°C = ___°F (d) 140°F = ___ °C

(4 marks)

14.



Use ruler and compasses only for this question.

(a) **Bisect** angle **Y.**

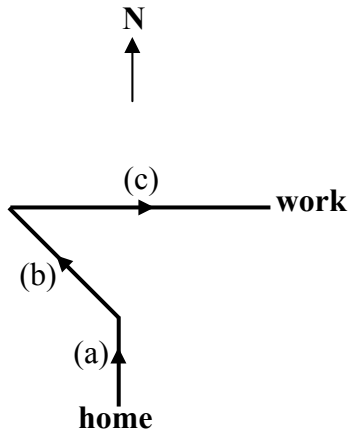
(b) Construct the **perpendicular bisector** of line **YZ.**

(c) Let the angle bisector (a) and the **perpendicular bisector** (b) meet at a point. **Label** the point **P.**

(d) **Measure PY, correct** to the nearest mm. _____

(5 marks)

15. Mr Dalli travels from **home** to **work** as shown in the diagram.
Write, in order, the **direction** of each part of the journey.



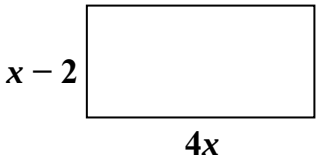
(a) _____

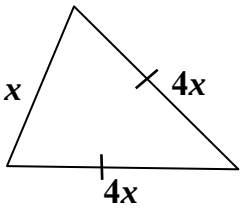
(b) _____

(c) _____

(2 marks)

16.





(a) Write an expression in x for the **perimeter**

(i) of the **rectangle**

_____

(ii) of the **triangle**

_____

(b) The two perimeters are **equal**. Write this as an equation in x.

_____

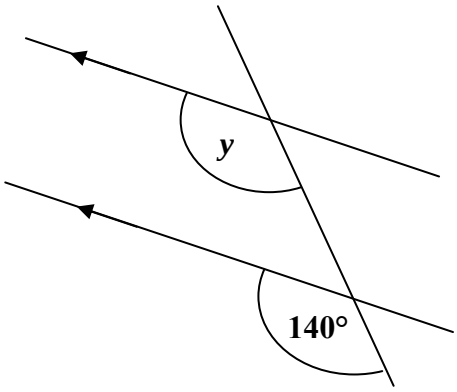
(c) **Solve** the equation.

x = _____

(5 marks)

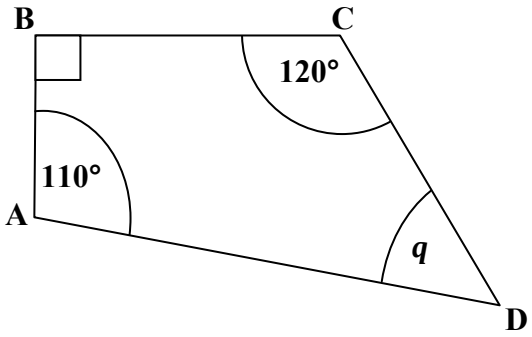
17. (a) Calculate the size of each **lettered angle**.

(i)



y = _____°

(ii)



q = _____°

Helen draws the above quadrilateral ABCD using **Logo**, such that:
AB = 20 turtle steps, **BC** = 30 turtle steps and **CD** = 35 turtle steps.

(b) Complete the following commands **starting from A**.

PD FD 20 ____ 90 FD 30 RT ____ FD ____ HOME

(6 marks)

End of Paper