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DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2012

FORM 4 **MATHEMATICS** **TIME: 20 minutes**
Non Calculator Paper

Name: _____ **Class: _____**

Question	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Total**
Mark																					

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**
- **This paper carries a total of 20 marks.**
- **Calculators and protractors are NOT ALLOWED.**

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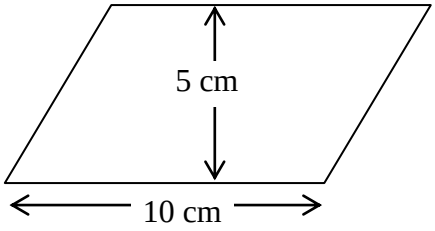
No.	QUESTION	SPACE FOR WO... REQUIRED)
1.	Write down the smallest number: A) 0.0132 B) 0.0092 C) ½ D) $\frac{1}{10}$ Answer: _____	
2.	Work out $-1655 - 45 =$ _____	
3.	Write down the area of the following parallelogram:  Answer: _____ cm^2	
4.	Solve: $x - 20 = 5$ Answer: _____	
5.	One of these numbers is a prime number. Which one is it? A) 1975 B) 30031 C) 2727 D) 1210 Answer: _____	
6.	Fill in the box: $20\% \text{ is } \frac{\square}{5}$	
7.	Work out the mean of the following numbers: 15 25 25 15 20 Answer: _____	
8.	An estimation for the area of a circle of radius 4 cm is A) 6 cm^2 B) 48 cm^2 C) 64 cm^2 D) 24 cm^2 Answer: _____cm^2	

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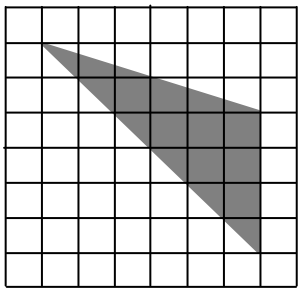
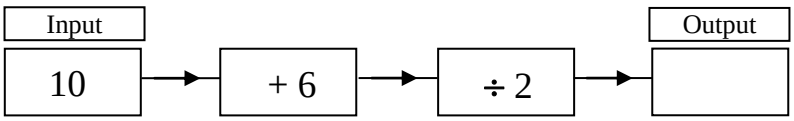
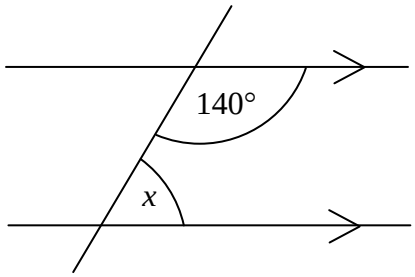
9.	 What is the area of the triangle? (Each square is 1 cm by 1 cm.) Answer: _____ cm^2	
10.	John spends three times as much as Paul on chocolate. John spends €4.20 on chocolate. How much does Paul spend? Answer: €_____	
11.	Write down the output of this number machine in the empty box.  Answer: _____	
12.	Find the size of x:  Answer: _____ °	
13.	A box contains 3 white marbles and 9 black marbles. I pick a marble at random. What is the probability that I pick a white marble? Answer: _____	
14.	A line has the equation $y = 5 - 2x$. When $x = 3$, $y =$ _____.	

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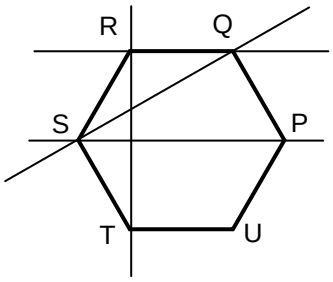
15. Simplify:

$$3a + 2b - a + 3b = _____$$

16. The number 545 rounded to the nearest 10 is

A) 545 B) 545.2 C) 550 D) 5452.3

Answer: _____

17. 

PQRSTU is a regular hexagon. One of the following lines is a line of symmetry. Which one is it?

A) QR B) RT C) PS D) QS

Answer: _____

18. A rod is 2.36 m long. What is its length in *millimetres*?

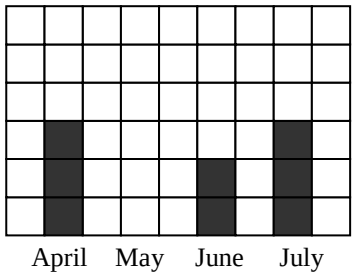
A) 236 B) 2360 C) 0.236 D) 23600

Answer: _____ mm

19. The table below shows the number of people who applied for a job in a company.

April	May	June	July
3	5	2	3

Complete the bar graph.



20. The turtle starts from the position shown.
Sketch the figure drawn by the turtle for
this set of LOGO commands:

PD LT 90 FD 100 RT 90 FD 50 RT 90 FD 100

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FORM 4 **MATHEMATICS SCHEME C** **TIME: 1h 40min**
Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Non Calc	**Global Mark**
Mark																		

Name: _____ **Class:** _____

CALCULATORS ARE ALLOWED BUT ALL NECESSARY WORKING MUST BE SHOWN.
ANSWER ALL QUESTIONS.

1. (a) Work out the following correct to one decimal place:

$$545.25 - 415.37$$

Answer: _____

(b) Work out the following correct to the nearest 10:

$$2542 + 791$$

Answer: _____

(4 marks)

2. (a) Simplify the ratios

(i) 12:15 Answer: _____

(ii) 25:150 Answer: _____

(b) Find x given that

$2x + 1 = 5$

Answer: _____

(5 marks)

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3. Given that $z = 2x + y^2$

(a) Calculate the value of z when $x = 1$, $y = 2$.

Answer: _____

(b) Calculate the value of z when $x = -2$, $y = 3$.

Answer: _____

(4 marks)

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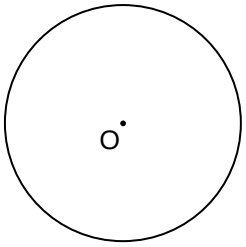
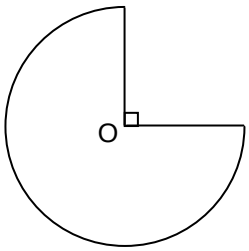
4. A pizza is in the form of a circle of radius 20 cm, with O as centre.



(a) Work out the length of the circumference of the pizza, giving your answer correct to two decimal places.
($C = 2\pi r$)

Answer: _____cm



(b) I cut a quarter of the pizza as shown. What is the perimeter of the remaining pizza to the nearest centimetre?

Answer: _____cm

(6 marks)

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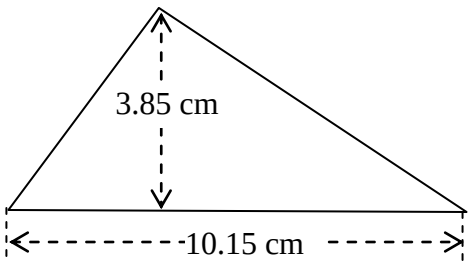
5. (a) Work out the area of the triangle correct to two decimal places.



Answer: _____cm^2

(b) Solve the equation $3x + 2 = 8$

Answer: _____

(5 marks)

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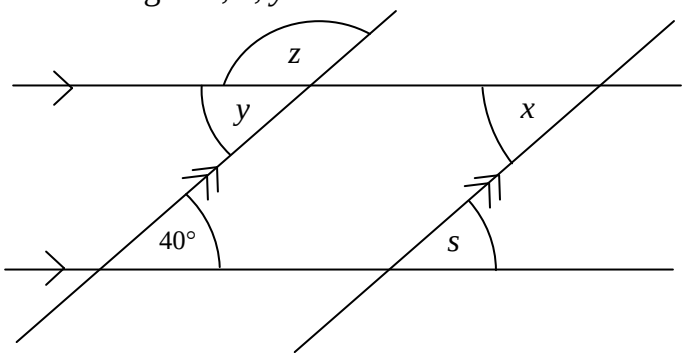
Name: _____ Class: _____

C

6. Calculate the value of angles *s*, *x*, *y* and *z*.



s = _____ ° *x* = _____ °

y = _____ ° *z* = _____ °

(5 marks)

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7. (a) I buy a coat costing €250 at 15% discount. How much do I pay for the coat?

Answer: €_____

(b) A car costs €4500. I pay ½ of this amount.

(i) How much do I still have to pay?

Answer: €_____

(ii) I pay the rest of the money in equal sums for the next six months. How much do I have to pay each month?

Answer: €_____

(6 marks)

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8. (a) Work out $\frac{1}{4}$ of 3.64 kg. (Give your answer in grams.)

Answer: _____ g

(b) Change 6152 g into kilograms.

Answer: _____ kg

(4 marks)

---

9. (a) I changed a €10 note into one €5 note, three €1 coins and the rest in 20c coins. How many 20c coins do I have?

Answer: _____ coins

(b) A **fair** coin is tossed 100 times. Estimate the number of times the coin shows a Head.

Answer: _____

(4 marks)

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10. Solve the equations:

(a) $4x + 6 = x$

Answer: x = _____

(b) $3x - 2 = x + 8$

Answer: x = _____

(6 marks)

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11. (a) Kyle and Petra have altogether 36 CD's.

(i) If Petra has *x* CD's and Kyle has *y* CD's complete the following equatio

x + ____ = 36

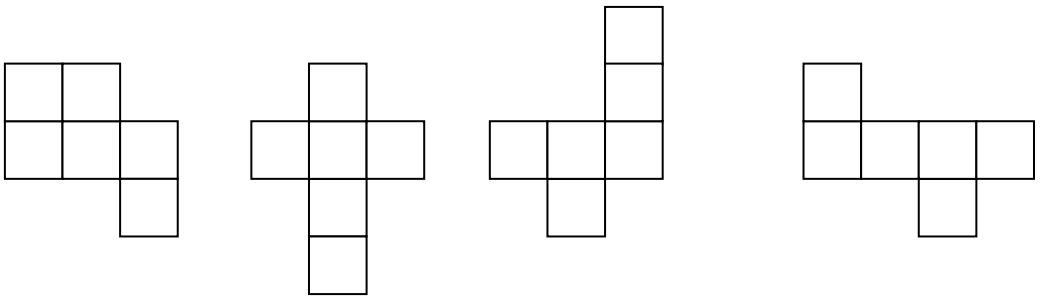
(ii) Kyle has five times as many CD's as Petra. Complete the following equation:

y = ____x

(iii) Petra has 6 CD's. How many CD's has Kyle?

Answer: _____CD's

(b) Two of the nets shown are that of a cube. Which are they?
Tick the correct answers.



A **B** **C** **D**

(6 marks)

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12. Luke draws the diagram below using LOGO.
∠ABC and ∠BCD are both **right angles**, and AB = CD.

(a) Complete the LOGO program which draws the shape.

```
PD
FD 50
RT _____
FD 100
_____ 90
FD _____
```

(b) Write down the perimeter in turtle steps of the shape drawn.

Answer: _____

(5 marks)

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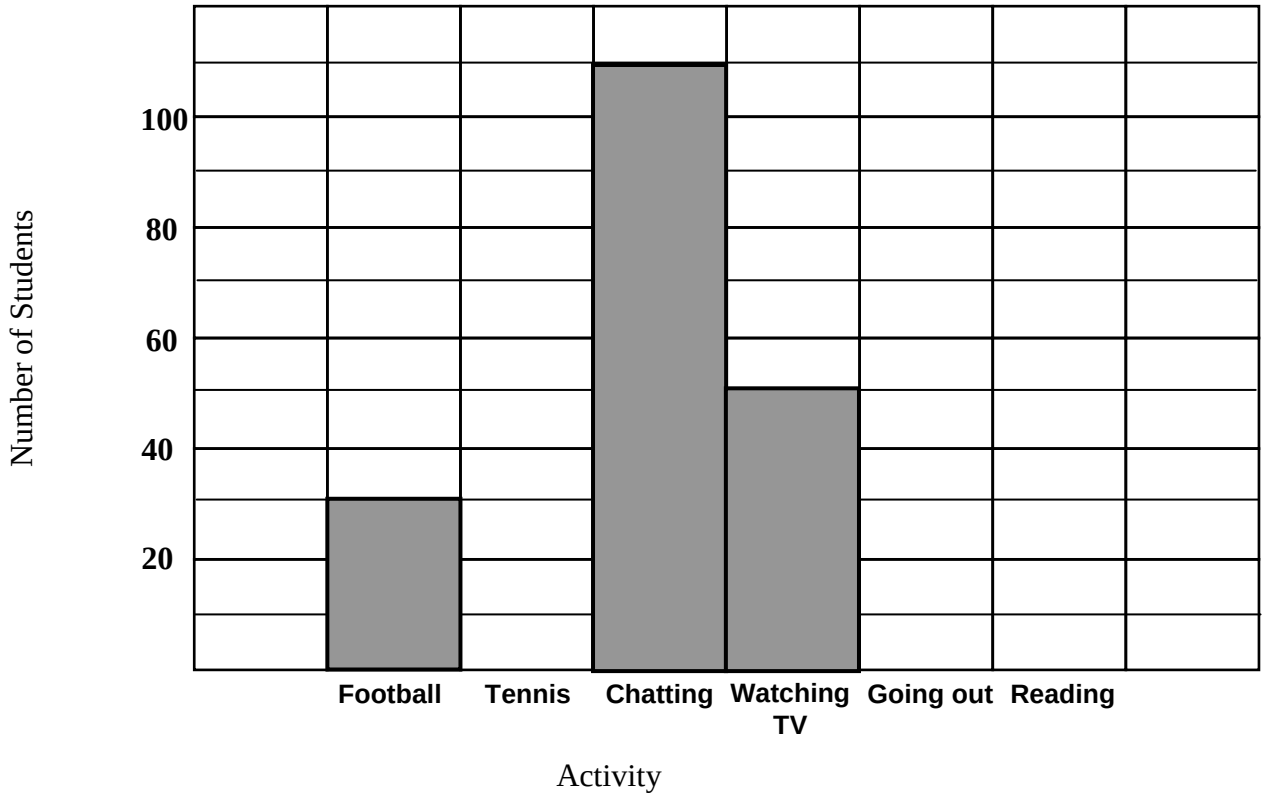
13. The headmaster of a school asked a number of students how they spend their time. The table shows how the students spend their time.

Activity	Football	Tennis	Chatting	Watching TV	Going out	Reading
Number of Students	30	40	110	50	70	55

(a) Use the table to complete the following bar chart.



(b) What is the total number of students questioned by the headmaster?

Answer: _____

(c) What is the ratio of the number of students who chat to the number of students who read?

Answer: _____

(8 marks)

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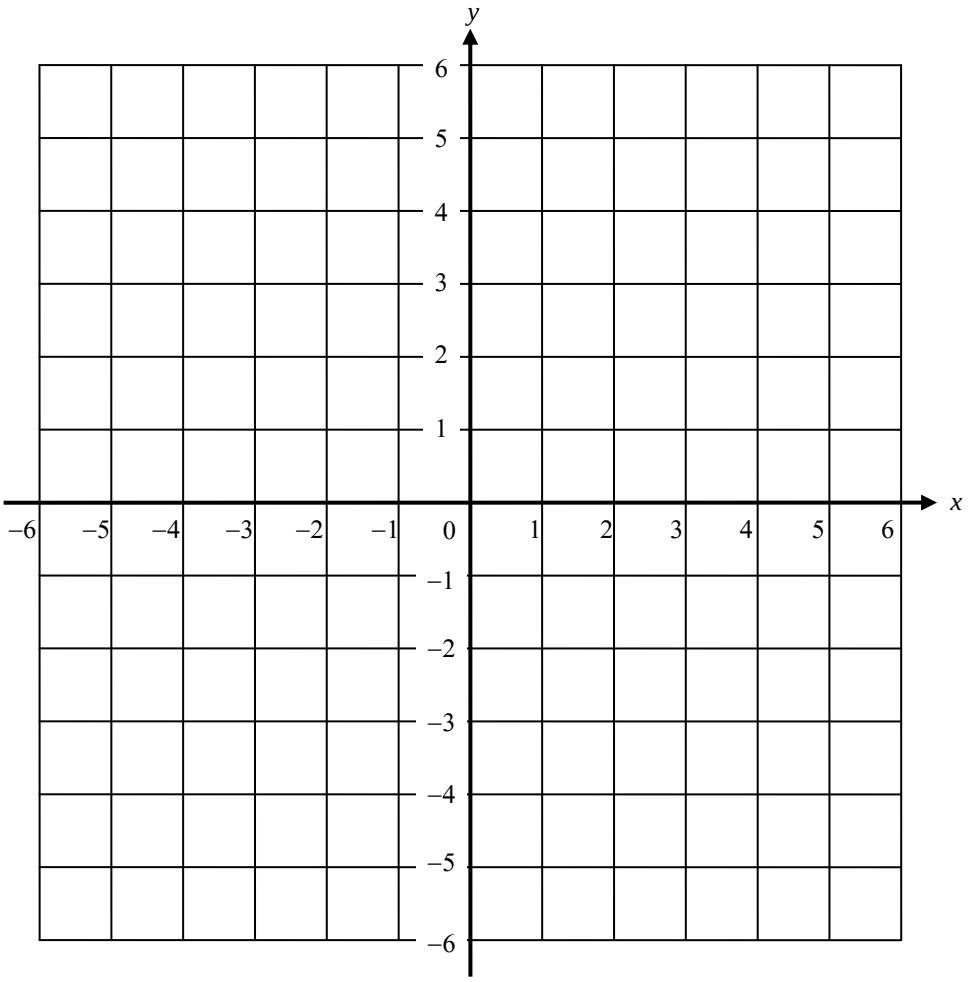
14. The points A and B have coordinates (−2, −2) and (2, 1) respectively.

(a) Mark the points A and B on the grid.

(b) Draw the line passing through these two points.

(c) Use your graph to complete the following pairs of coordinates:

(−4, ___), (4, ___)



(6 marks)

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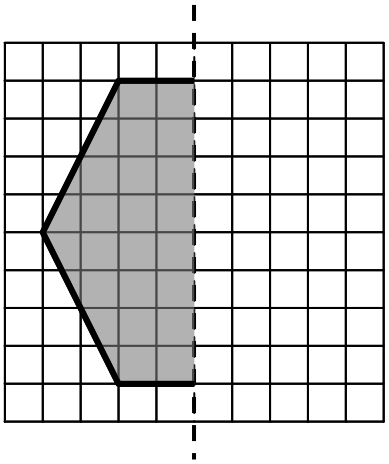
15. The diagram shows part of a regular hexagon. The dotted line is a line of symm



(a) Complete the diagram.

(b) How many lines of symmetry does this hexagon have?

Answer: _____

(c) What is the order of rotational symmetry of the hexagon?

Answer: _____

(d) Each side is 5.63 cm long. What is the perimeter of the hexagon?

Answer: _____

(6 marks)

End of Paper

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