



**THE
AMERICAN
ACADEMY
NICOSIA**
PRIVATE SCHOOL
EST. 1922

The American Academy Nicosia

Sample 2 Entrance Examination

Serial number 202212

Mathematics
Year 7
Time Allowed: 1 hour

Read the below instructions carefully before starting the exam:

- Read all instructions carefully.
- If you cannot answer a particular question, move on to the next one without losing time.
- Use of calculator is not allowed.

1. Calculate $536 + 297$

Answer:[2]

2. Calculate $536 - 297$

Answer:[2]

3. Calculate 536×4

Answer:[2]

4. Calculate $2184 \div 7$

Answer:[2]

5. Calculate:

(a) $\frac{5}{7} - \frac{3}{7} =$

Answer:[1]

(b) $\frac{4}{9} \times \frac{18}{12} =$

Answer:[3]

(c) $\frac{5}{7} \div \frac{3}{14} =$

Answer:[3]

6. Find the next two numbers in these sequences:

(a) 14, 17, 20, 23,,

(b) 23, 19, 15, 11,,

[4]

7. If by consuming 10 caramels you take 30 calories, how many calories do you take by consuming 35 caramels?

[3]

8. Work out $3 + 4 \times 5 =$

[2]

9. Find $\frac{5}{8}$ of 560 kg.

[2]

10. My garden centre sells summer bedding plants at 85 cents each. I have €30 to spend. How many plants can I buy? Show your working.

[3]

11. Choose from this set of numbers.

8	9	10	11
12	13	14	15

(a) a square number

Answer:[1]

(b) three multiples of 3.

Answer: , , [3]

(c) three factors of 60

Answer: , , [3]

12. Change 0.72 to a fraction leaving your answer in its simplest form.

Answer: [1]

13. I buy 5 bottles of drink, each costing €1.45 and 4 cakes, each costing 63 cent.

(a) What is the total cost?

Answer:[3]

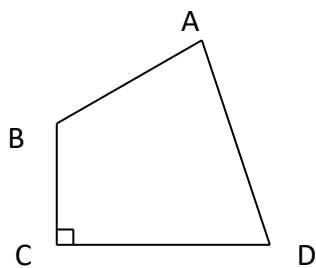
(b) How much change do I receive from a €20 note?

Answer: [2]

14. On Christmas day the temperature in Lisbon was $-5^{\circ}C$. On New Year's day the temperature was 3 degrees lower. What was the temperature on New Year's day?

Answer: [2]

15. From the following shape find:



(a) One acute angle

Answer:[1]

(b) One obtuse angle

Answer:[1]

(c) One right angle

Answer:[1]

16. Convert the following into decimal form:

(a) 35%

Answer:[1]

(b) $\frac{7}{20}$

Answer:[1]

(c) $\frac{38}{1000}$

Answer:[1]

17. A train leaves London at 22:45 and reaches Aberdeen at 05:30 the next morning.

(a) Work out how long the journey takes in hours and minutes.

Answer: hours minutes (2)

An airplane leaves London at 22:45 and takes a total of 11 hours and 35 minutes to fly to Hong Kong. Hong Kong is 7 hours ahead of London (i.e. when the time is 13:00 in London, it is 20:00 in Hong Kong).

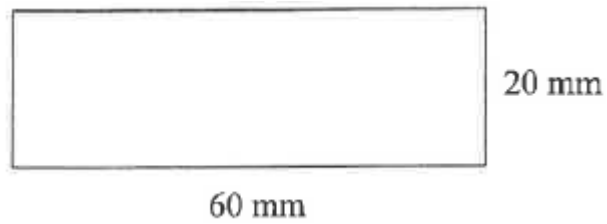
(b) Work out what the local time is in Hong Kong when the flight lands. Give your answer in 24 hour form.

Answer: : (3)

18. I think of a number, subtract 7 and then divide by 5 and the result is 7. What was the number I thought of?

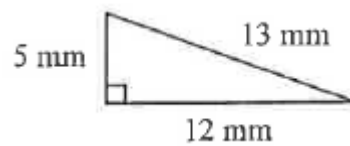
Answer:[2]

19. (a) Find the area of the rectangle shown below.



Answer: mm^2 [2]

George cuts the rectangle up into exact number of right-angled triangles, each with sides as shown in the diagram below.



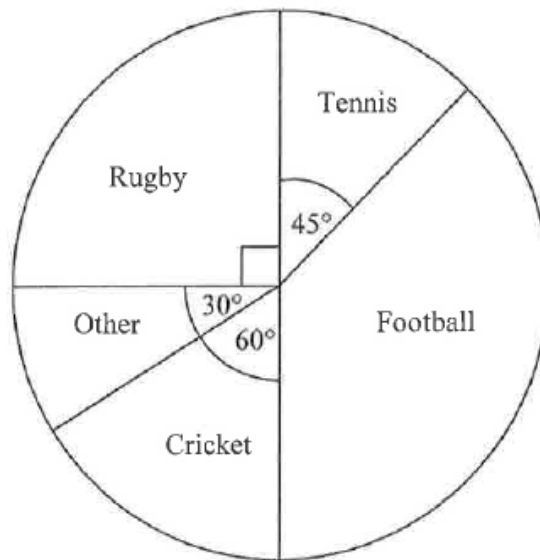
(b) Calculate the number of triangles that he cuts from the rectangle.

Answer: [3]

20. Find x if $23 - x = 45$.

Answer: [2]

21. The pie chart below represents data collected in a survey by a PE teacher about the favourite sports of a sample of 240 children in a school.



(a) What do children mostly prefer?

Answer:[1]

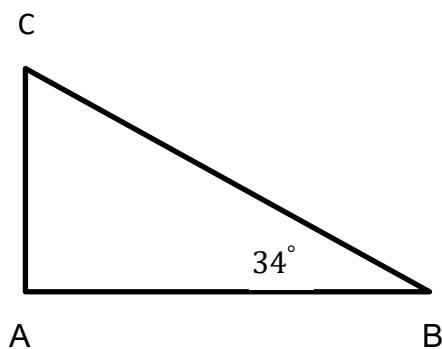
(b) How many children prefer rugby?

Answer:[2]

(c) What's the percentage of the children who prefer **Cricket or Other activity**?

Answer:[2]

22. The triangle ABC is a right – angled triangle. Angle B is 34° . Find angle C.



Answer:[4]

23. Round the following numbers:

(a) 123 (to the nearest ten)

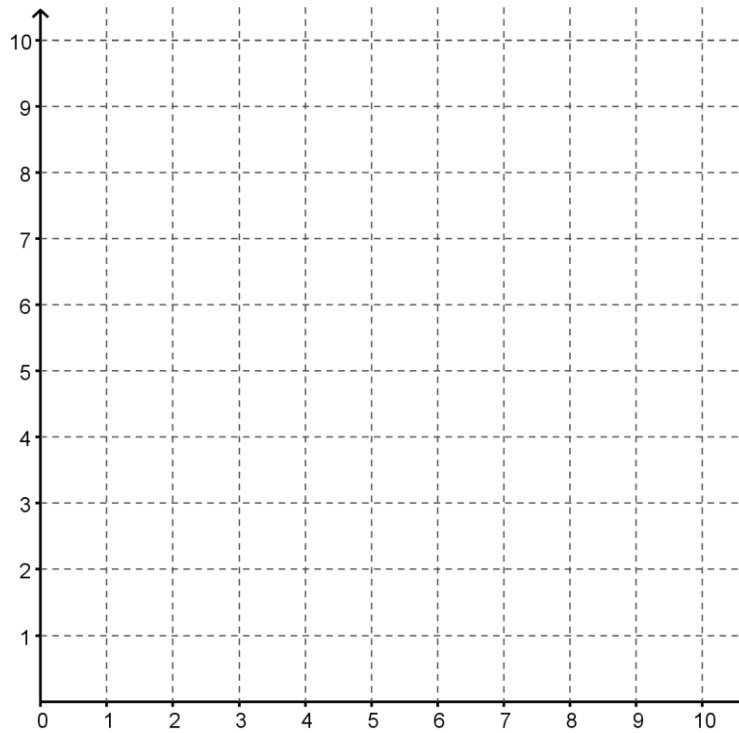
(b) 4789 (to the nearest hundred)

(c) 47400 (to the nearest thousand)

(d) 3.55 (to the nearest whole number)

[4]

24. A, B and C are three points on a grid. A is at (5, 2), B is at (4, 5) and C is at (3,0).



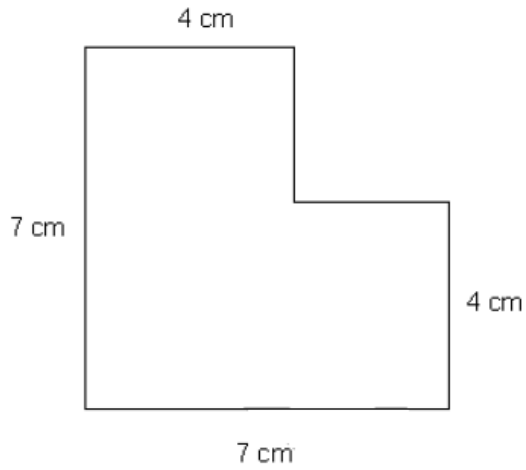
(a) Plot and label the other two points, B and C, and then join the three points and lightly shade the triangle you have formed.

[2]

(b) State the name of the type of triangle that has been formed.

Answer: [1]

25. Find the perimeter and area of this shape.



Area: [3]

Perimeter: [3]

26. Calculate 30% of €240.

[2]

27. Which has the BIGGEST answer?

7×4

6×5

2×5

$16 + 15$

$\frac{1}{2}$ of 60

Answer: [2]

28. A dice has numbers from 1 to 6. If it is rolled once, what is the probability of each of these outcomes?

(a) Rolling a 3

(b) Rolling a number less than 5

(c) Rolling a number greater than 1

(d) Rolling a number that is a multiple of 7










[4]

29. If $a = 8$, $b = 3$ and $c = 5$ calculate

$$(a - b) \times c$$

[3]

30. Each shape in this grid is hiding a particular number so that the three shapes in any row or column add up to the value written at the end of that row or column.

			16
			12
			18
15	14	?	+

Work out the number that should replace the question mark.

Answer:[3]

END OF PAPER