



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

# **The American Academy Nicosia**

## **Sample 1 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. Work out:

(a)  $2739 + 639 =$

[1]

(b)  $8491 - 987 =$

[1]

(c)  $657 \times 8 =$

[1]

(d)  $1048 \div 8 =$

[1]

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2. Calculate:

(a)  $\frac{2}{3} - \frac{3}{5} =$

[3]

(b)  $\frac{3}{4} \times \frac{7}{27} =$

[3]

(c)  $\frac{7}{8} \div \frac{3}{4} =$

[3]

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3. Find the next two numbers in these sequences:

(a) 4, 7, 10, 13, ....., .....

(b) 37, 32, 27, 22, ....., .....

[4]

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4. 732 students from Nicosia are going to the Waterworld Water Park at Ayia Napa. There are 14 coaches to transport them each of which can take 50 students.

(a) How many students can travel in the coaches?

[3]

(b) The students that cannot fit onto the coaches are transported by taxi. Each taxi can transport 4 students. How many taxis are needed?

[3]

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5. Work out  $7 \times 14 - 5 \times 15$

[3]

6. Adam spends  $\frac{2}{5}$  of his salary every month. If he earns €1080 per month, how much money does he spend?

[3]

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7. How many centimetres are there in 5.3 metres?

[1]

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8. If 5 calculators cost €117.50. find how much we will pay for 7 calculators.

[3]

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9. Calculate how much bigger  $3\frac{1}{4}$  is than  $1\frac{3}{4}$ , writing your answer as a decimal.

[4]

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10. A newborn baby weighs 3250 grams. What is this in kilograms?

[1]

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11. For Ben's birthday he goes to the cinema. Tickets cost €3.85 for children and €5.50 for adults. In his party there are 4 children and 2 adults.

(a) How much does he pay for all the tickets?

[3]

(b) Ben's mum pays with two €20 notes for the tickets. How much change does she receive?

[2]

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12. In Russia the temperature was  $-23^{\circ}\text{C}$ , while at the same time in Greece was  $3^{\circ}\text{C}$ . What is the difference between the temperature in Russia and Greece?

[2]

13. Convert these to decimals:

(a) 5%

[1]

(b)  $\frac{3}{25}$

[1]

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14. A train leaves station A at 07:24 and arrives at station B at 11:03. How long did the journey take? Give your answer in hours and minutes.

[3]

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15. I think of a number, add 6 and then multiply by 4 and the result is 36. What was the number I thought of?

[2]

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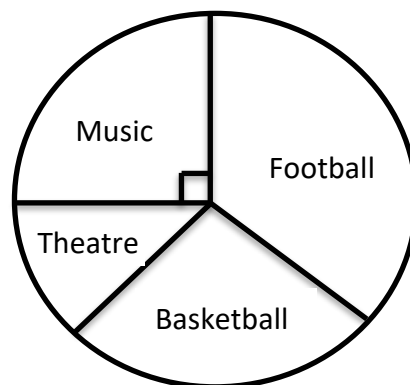
16. The length of this rectangle is three times as its width. Find the area and the perimeter of the rectangle.



6 cm

[5]

- 
17. The pie chart shows the after school activities of 36 students at Warwick College.



- (a) Which is the most common activity among the students at the college?

[1]

- (b) How many students have music as an after school activity?

[2]

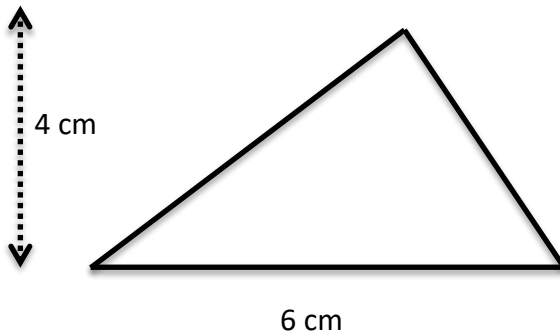
18. (a) List the factors of 18

[3]

(b) List the multiples of 8 that are less than 35.

[2]

19. Work out the area of this triangle.



[2]

20. Round the following numbers:

(a) 123 (to the nearest ten) .....

(b) 0.47 (to the nearest tenth) .....

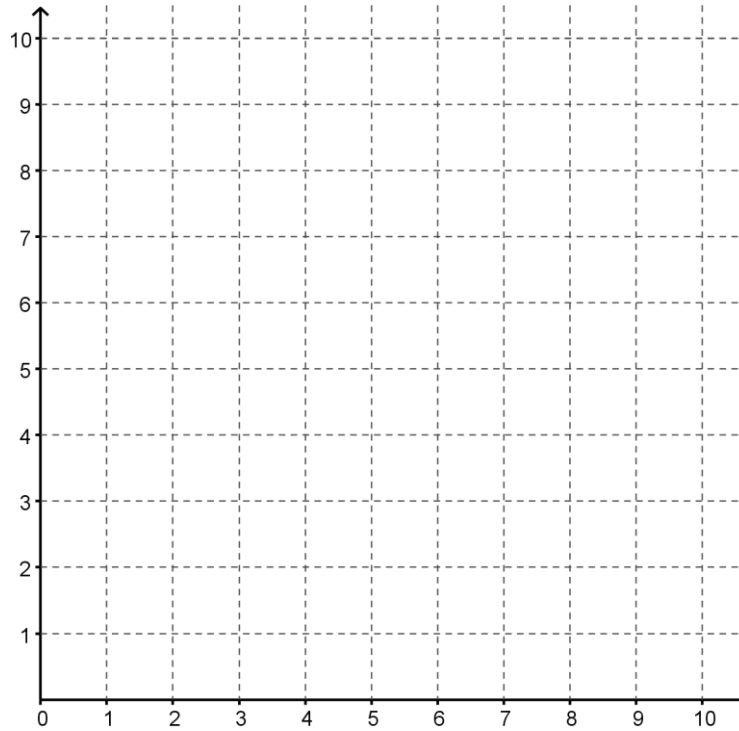
(c) 47100 (to the nearest ten thousand) .....

(d) 34.6 (to the nearest whole number) .....

[4]



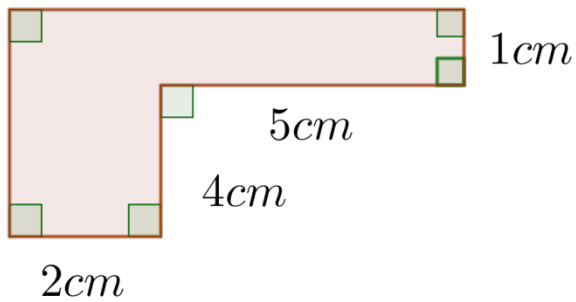
21. (a) Plot the points  $(2,2)$ ,  $(8,2)$ ,  $(7,7)$  and  $(3,7)$  and join them up to make a shape.



(b) What name is given to this shape? [2]

[1]

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22. Find the perimeter and area of this shape.



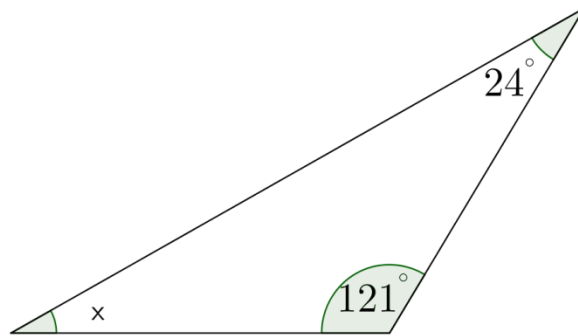
[5]

23. Calculate 40% of €280.

[2]

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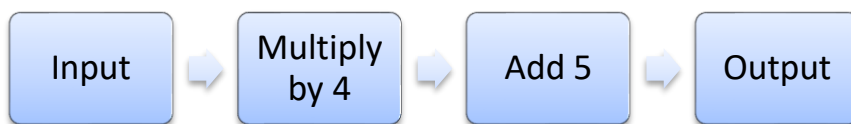
24. Find  $x$ .



[3]

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25.



(a) If the input is 3, what is the output?

[1]

(b) If the output is 33, what is the input?

[2]

(c) If the input is  $x$ , what is the output?

[2]

26. 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 5

(b) Rolling a number greater than 2

(c) Rolling a number less than 7

(d) Rolling a number that is a multiple of 8

[4]

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27. Evaluate  $a - bc$  if  $a = 11$ ,  $b = 4$  and  $c = 2$

[3]

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28. In magic squares, the numbers in every row, column and the two diagonals add up to the same number. Complete the missing numbers and find the sum of the missing numbers.

4	8	9
	7	

[4]

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**END OF PAPER**