

**DULWICH INTERNATIONAL | SUZHOU |  
HIGH SCHOOL**

SUZHOU HIGH SCHOOL

德威国际高中, 江苏省苏州中学



## 2019 IGCSE Entrance Test Sample

### Mathematics – Section A

10 minutes

10 marks

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#### Instructions 说明：

Section A is a vocabulary test A 部分是词汇测试

- No glossary is to be used 不可使用词汇表
- No Calculator is to be used 不可使用计算器
- Please answer the questions in the boxes below. 请在下面方框里填写答案
- Each question is worth 1 mark. 每空一分
- This section will be collected in after 10 minutes. 10 分钟后此部分卷子将被收回。

**Do not turn over until instructed to do so.**

**请等监考官说开始，方可翻阅试卷。**

**NAME:** \_\_\_\_\_

1. Two opposite sides in a rectangle are \_\_\_\_\_.
2. The sum of the square root of 36 and the cube of 3 is \_\_\_\_\_.
3. A number which has only two factors is called a \_\_\_\_\_.
4. A square has a perimeter of 28cm, the area is \_\_\_\_\_.
5. Find the mean of 4,7,8,9,10,12,13.
6. There are 24 boys and 40 girls in a class. Write this as a ratio in its simplest form.
7. The obtuse angle in an isosceles triangle is  $130^\circ$ . What is the size of the acute angle?
8. Write down four factors of 60
9. In a bag there are 4 red balls and 8 green balls. I choose a ball at random. What is the probability that the ball is green.
10. Lines which cross at  $90^\circ$  are \_\_\_\_\_.

No.	Answer	Marks
1	PARALLEL	1
2	33	1
3	Prime (number)	1
4	$49 \text{ cm}^2$	1
5	9	1

No.	Answer	Marks
6	3:5	1
7	$25^\circ$	1
8	Any four from 1,2,3,4,5,6,10,12 15,20,30,60	1
9	$\frac{2}{3}$	1
10	PERPENDICULAR	1

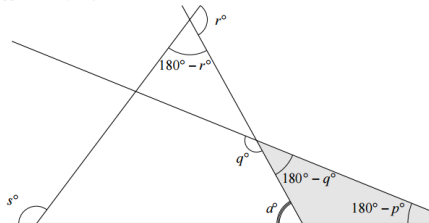
## Section B Answers

1. 3.85
2. (-7,16) (-4/3 , 25/9)
3. 3,4
4.  $3y + x - 5 = 0$
5.  $7/12 = 0.5833\dots$
6.  $45 \text{ m}^2$
7.  $-0.745$  or  $-\frac{\sqrt{5}}{3}$
8. 3.0558
9. 9.165
10. 14
11. 13
12. 15
13. 80
14. 18
15. 9

## Section C

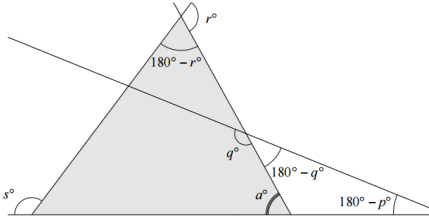
### Method 1

We start by using 'angles on a straight line add up to  $180^\circ$ ' to mark on the diagram supplementary angles.



Now we know two of the interior angles in the shaded triangle, and hence can use the fact that the sum of the interior angles of a triangle is  $180^\circ$  to find  $a$ :  $a = (180 - p) + (180 - q) = 360 - p - q$ .

We now have expressions for two of the interior angles of the triangle shown in the next figure.



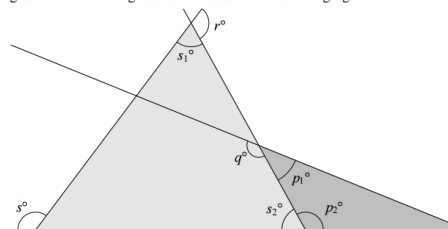
Therefore, once again using 'an exterior angle of a triangle is the sum of the two opposite interior angles', we obtain

$$s = (360 - p - q) + (180 - r),$$

which we may rearrange to give  $p + q + r + s = 540$ .

### Method 2

We start by using 'an exterior angle of a triangle is the sum of the two interior opposite angles' in the two triangles shown shaded in the following figure.



We obtain  $s = s_1 + s_2$  and  $p = p_1 + p_2$ .

Now we notice that we have a pair of angles together at each of three points, so 'angles on a straight line add up to  $180^\circ$ ' three times to get

$$p_1 + q = 180$$

$$r + s_1 = 180$$

$$\text{and } p_2 + s_2 = 180.$$

Adding these three results together, we obtain  $p_1 + q + r + s_1 + p_2 + s_2 = 540$ , which it follows that  $p + q + r + s = 540$ .

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## 2019 IGCSE Entrance Test Sample

### Science

45 minutes

30 marks

Pinyin Name: \_\_\_\_\_

#### Answers to all questions

##### Section A

1. Electrons
2. Reflected
3. Scalar
4. Magnetic
5. Voltmeter
6. Newtons
7. Refracted
8. Ammeter
9. Nucleus
10. Gravity

##### Section B

11. D
12. C
13. D
14. B
15. A

16. A
17. B
18. B
19. D
20. C
21. A
22. A

##### Section C

23. A
24. C
25. A
26. D
27. B
28. C
29. D
30. A