Dulwich International High School Suzhou's IGCSE International Curriculum Suitability Assessment Information – 2021

苏州德威国际高中 IGCSE 国际课程适应力评估信息 – 2021 年

The IGCSE International curriculum suitability assessment is designed as a comprehensive assessment of students' ability to access our curriculum and succeed in our school. 本次 IGCSE 国际课程适应力评估旨在全面评估学生是否能够成功完成我校学业的能力。

Due to the way the assessment is scheduled, students possibly may not sit the assessment in the order listed in this document. One week before the assessment, each candidate will be informed of the order in which they will sit the assessment. 关于评估的具体安排，相关科目的评估时间可能不按照以下列表的顺序。评估前一周内，每个学生都会收到评估时间的具体安排通知。

The Assessment will comprise 评估由以下部分组成：

A. English Computer Based Assessment 英语综合运用评估 – 60 minutes

B. Writing Assessment 英文写作能力评估 – 30 minutes

C. Mathematics Assessment 数学水平评估 – 60 minutes

Equipment 所需文具及其他说明：

Students will be provided with a pen, pencil and eraser.
我校会提供一切评估所需文具及物品，包括中性笔、铅笔和橡皮。

DHSZ has a zero-tolerance policy of academic dishonesty – Students discovered with unauthorized materials or cheating in any way will be disqualified from the entire assessment and not be permitted to sit a further admissions assessment during that academic year.
苏州德威国际高中严禁作弊，如学生被发现携带未获许可带入评估现场的物品，或有任何形式的作弊，会被取评估资格，并在该学年内不得参加任何我校评估。

Following the assessment, students may be invited for further assessment or interviews.
参加评估当天，学生可能会被邀请到我校做进一步评估或面试。

English Computer Based Assessment (up to 60 minutes)
英语综合运用评估（60 分钟）

Section A: Use of English (30 mins)
The Use of English section will comprise of approximately 30 questions which test students' ability to distinguish and select the correct verb tenses, sentence structures, and vocabulary. There are two parts to the test. The first section is a multiple choice test in which students will be asked to select the most appropriate answer from a selection of four possibilities, based on contextual clues in a reading excerpt. The second section is an open cloze test, in which students will be given a single, long text with blanks and they will be required to fill in the blanks, based on contextual clues.

A 部分：英文知识运用（30 分钟）
此部分将包括大约 30 个问题，主要评估学生对语法和词汇的掌握能力。此评估共有两个部分。第一部分是单项选择题，主要基于一份阅读节选，要求学生根据上下文线索，从四个选项上选出最合适的答案。第二部分是一个开放式的完形填空，要求学生在提供的文章中，根据上下文线索及对英语运用的综合掌握能力，填出空白部分。

Section B: The Listening and Comprehension Assessment (30 mins)
The Listening section is a multiple choice test and will comprise of approximately 15 questions which test students' ability to hear and understand the meaning of short listening. Students will have the option to listen to the recordings twice, and then, from the four options, select the answer which best fits their understanding of the listening.

B 部分：听力和阅读理解评估（30 分钟）
此部分是单项选择题，此部分问题类型比较广泛，将包括大约 15 个问题，主要评估学生听取和理解短文的能力。学生将听两遍录音， 然后从四个选项中， 选择他们理解的最适合的答案。

Writing Assessment (30 minutes)
英文写作能力评估（30 分钟）

The assessment will require students to write an essay which explains the opinions, reasons, causes, or effects of a particular issue which exists in the modern world. Although students will not be tested on the content of the essay, it is expected that students will be able to describe their thoughts on the topic and give reasonable and appropriate explanations. Students should write between 150-200 words, and they should make sure that the essay conforms to an essay structure (i.e. have an introduction and conclusion.)
这项评估要求学生写一篇表达个人观点、阐述理由和原因或是针对现代社会中存在的问题所造成的影响进行阐述的文章。此项评估旨在观察学生能否根据主题表达个人观点并给出合理的阐述。文章规定为 150-200 字，学生应确保所写文章和要求的结构相符（即有开头、主体、结尾）。

Mathematics Assessment (60 minutes)
数学能力评估（60 分钟）

Bilingual paper, 60 minutes in total
数学能力评估为中英文双语对照，由ABC三部分组成，共计60分钟

Section A consists of 10 short bilingual questions, assessing some basic mathematical principles and key vocabulary required. The topics to be assessed will be:
A 部分由 10 道基础数学题组成，评估基本的数学原理和所需的关键词汇。考查知识点如下：

1. Solving Linear equations 解线性方程
2. Solving Quadratic Equations 解一元二次方程
3. Angles in parallel lines 与平行线相关的角
4. Areas and Volumes 面积和体积
5. Circles 圆
6. Averages 求平均值
7. Probability 概率
8. Number properties 数的性质
9. Triangles 三角形
10. Sequences and patterns 数列和找规律

Section B consists of short bilingual questions designed to assess a broad range of key mathematical ideas, which are designed to thoroughly assess the students understanding of the more demanding aspects required. This will consist of 10 questions, 5 assessing a good understanding of mathematical techniques and 5 more challenging questions assessing the use of mathematical ideas.
B 部分是通过简答题来评估学生目前所学到的关键性的数学知识点，以及全面评估学生对要求更高的知识点的掌握。共包含 10 道问题，其中 5 道题将评估对于数学理论的理解力，5 道更具挑战性的问题将评估运用数学思维来解决问题的能力。

Section C consists of 1 question which is highly demanding, requiring excellent mathematical fluency, and an ability to apply mathematical concepts in the most difficult of situations. Full working (method) should be shown for this section. Zero marks will be awarded for writing only the answer.
C 部分为 1 道难度较大的解答题，要求学生有出色的数学知识运用能力，以及在高难度的问题中运用数学概念的能力。所有的解题步骤都必须呈现出来，只填写最后的答案将会被零分处理。
The B and C parts of the Mathematics Assessment mainly examines the wider range of knowledge taught in junior high schools.
数学能力评估中的 B 和 C 部分，会考查更广泛的知识点，考察知识点如下：

Topics may include:
1. Linear equations 线性方程

2. Quadratic equations and functions 二次方程与函数
3. Linear inequalities 线性不等式
4. Angles in parallel lines and circles 平行线和圆的定理
5. Similar shapes 相似图形
6. Right-angled triangles (sin/cos/tan and Pythagoras theorem) 直角三角形(sin/cos/tan 和毕达哥拉斯定理)
7. Length/Area/Volume calculations 长度/面积/体积计算
8. Probability and statistics 概率和统计

2021 Sample Paper

Mathematics – Sections A, B and C

数学 A、B、C 部分

60 minutes

36 marks

Instructions:

- A glossary may be used 可使用我校现场提供的双语词汇表
- A Calculator may be used 可使用计算器
- Please answer the questions on the separate answer booklet. 请将答案填在答题卡上
- Please put your name clearly on each booklet used. 请将你的姓名清楚地写在答题卡上
- For Section A, each correct answer is awarded 1mark. A 部分每个正确的答案得 1 分
- For Section B, each correct answer is awarded 2 marks. B 部分每个正确的答案得 2 分
- No marks are taken away for incorrect answers. 答错不得分
- Section B is worth 10 marks.   A 部分总分为 10 分
- Section B is worth 20 marks.   B 部分总分为 20 分
- Section C is worth 6 marks.   C 部分总分为 6 分
- You must show your process in Section C to gain marks C 部分必须显示计算解题步骤来得分

Do not turn over until instructed to do so.
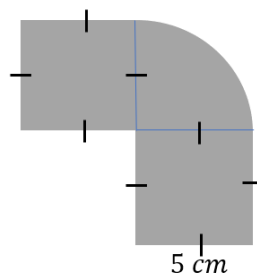
请等监考老师说开始时，方可翻阅试卷。

1. Solve $5(2x - 3) + 2x = 6x - 1 - 2(3 - 2x)$

2. Solve $x^2 - x - 42 = 0$

3. Find the value of x
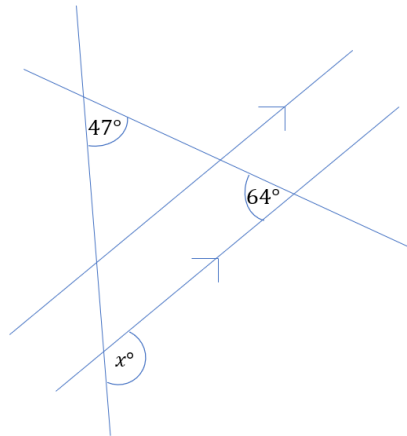
4. Find the volume of the following shape:
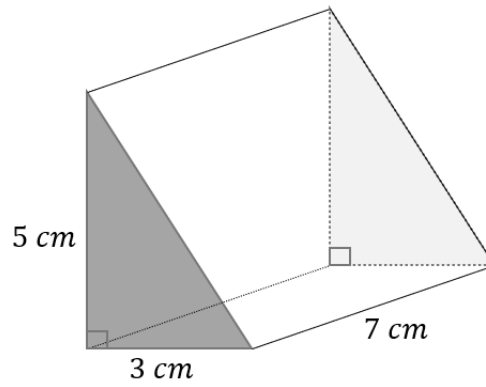
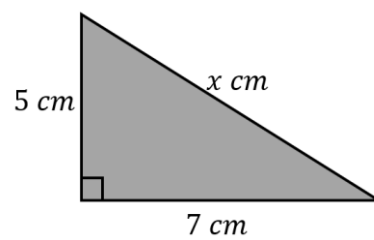5. Find the area of the following shape

6. Find the mean of the following numbers

   12   14   15   11   10   10   17   21

7. In a bag there are 4 red balls and 8 green balls.   I choose two balls at random.   Find the probability that the both balls are green.

8. Find the sum of the square root of 36 and the cube of 3.

9. Find the value of x.

10. Find the nth term in the following pattern

    17, 14, 11, 8,   5

SECTION A ANSWER GRID

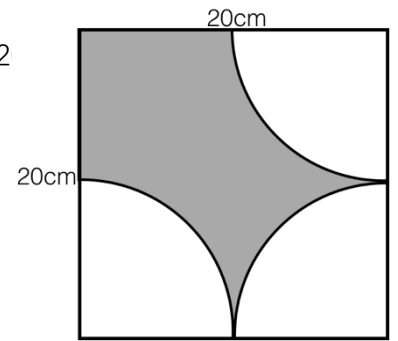| 1.	$x = 4$	6.	13.75
2.	$x = 7, x = -6$	7.	$\frac{14}{33}$ or 0.4242⋯
3.	111°	8.	33
4.	52.5 cm	9.	$\sqrt{74}$; 8.60 cm
5.	69.6 cm^2	10.	$-3n + 20$

Section B

1) The diagram shows a square with sides of length 2

Three quarter circles are removed from the square, what

is the area of the shaded region?

如图所示，一个边长为 20cm 的正方形。在三个顶点处挖去
一个四分之一圆，求阴影部分的面积。

2) Three equations are given as

$$-a - b - 2c = 3$$
$$2a - b + 2c = 0$$
$$-a + b = 1$$

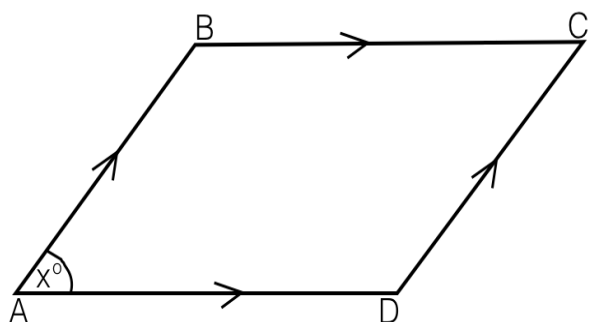Solve them to find a, b and c.

解方程组

$$-a - b - 2c = 3$$
$$2a - b + 2c = 0$$
$$-a + b = 1$$

求 a, b, c

3) In the diagram, the area of the sh

given as $100\sqrt{3}$.

If $AB:BC$ is equal to 1:2, and $x = 60$,
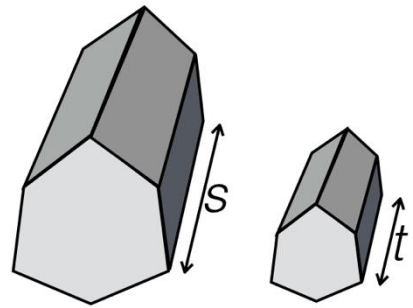
find the length of BC.

如图所示，图形的面积是$100\sqrt{3}$。

已知 $AB:BC$ 等于 1:2, $x = 60$, 求 BC 的长。

4) Two similar prisms are shown, the volume of the larger prism is 243cm^3 and the volume of

the smaller prism is 72cm^3.

If $t = 9$, what is the value of s?

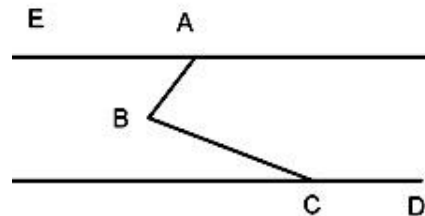图中为两个相似棱柱。大棱柱的体积是 243cm^3，小棱柱的体积是 72cm^3。已知 $t = 9$，求 s 的值。

5) EA is parallel to CD, angle $EAB = 25°$ and angle BCD is 155°. What is the acute

angle ABC?

已知: EA 平行于CD, $\angle EAB = 25°$,

$\angle BCD = 155°$, 求锐角$\angle ABC$。

6)   If the equation $2x(p - x) = 3$ has real and equal roots, find the exact values of p.
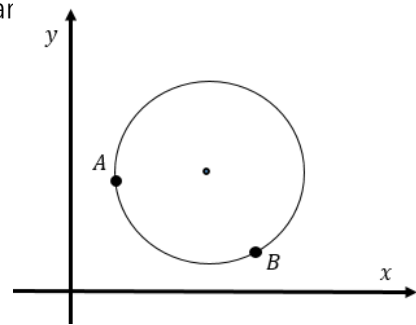
已知方程$2x(p - x) = 3$有相等的实数根，求p的准确值。

7) Find the product of two numbers if their difference is 48 and the sum of their

squares is 3264.

已知：两个数的差是 48，两个数的平方和是 3264。求两个数的积。

8) The line AB is a chord where $A(4,7)$ an

Find the equation of the line that passes through

the centre of the circle and the midpoint of AB.

已知：圆中的弦AB的端点坐标为$A(4,7)$
和 $B(12,3)$ 。
求过圆心和AB的中点的直线的方程。

9) An equation is given as

$$\frac{4}{y} = \frac{2}{x+5} + \frac{x}{3}, \ x \neq -5, y \neq 0.$$

Make y the subject. (i.e. in the form $y = \cdots$)

已知关于x, y的方程

$$\frac{4}{y} = \frac{2}{x+5} + \frac{x}{3}, \quad x \neq -5, y \neq 0.$$

求 y 关于 x 的表达式。

（形式为 $y = \cdots$）

10)　A bag of balls contains twelve balls, seven are red and five are blue.

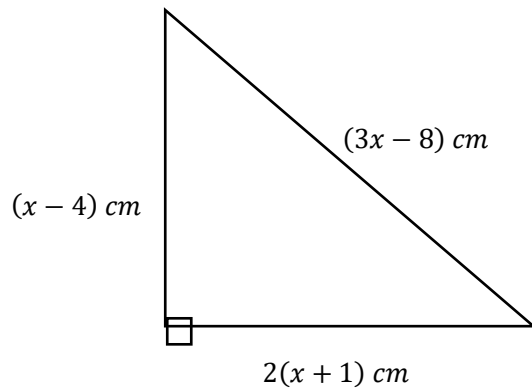I take three balls from the bag without putting them back, what is the probability that

there are less than two blue balls?

一个袋子里有 12 个球，七个红球，五个蓝球。从袋子里随机拿出三个球，每次拿出

的球不再放回去，问三个球中少于两个蓝球的概率是多少？

Section B answer grid

1. $400 - 75\pi$	6. $\sqrt{6}, -\sqrt{6}$
2. $a = -5, b = -4, c = 3$	7. 480
3. 20	8. $y = 2x - 11$
4. $13.5\ cm$	9. $y = \frac{12(x+5)}{(x+2)(x+3)}$ (or $y = \frac{12(x+5)}{x^2+5x+6}$)
5. 50	10. $\frac{7}{11}$

Section C

Find the area of the above triangle.   Show your working.
求出三角形的面积，需要写出解题过程。

ANS:

By Pythagoras' Theorem,

$$(x-4)^2 + 4(x+1)^2 = (3x-8)^2$$

Expand and simplify

$$x^2 - 8x + 16 + 4x^2 + 8x + 4 = 9x^2 - 48x + 64$$

$$4x^2 - 48x + 44 = 0$$

$$x^2 - 12x + 11 = 0$$

Factorise and solve for x.

$$(x-11)(x-1) = 0$$

Therefore,

$$x = 1 \quad \text{(reject – need } x - 4 > 0 \text{ (and } 3x - 8 > 0))$$

$$x = 11.$$

Base = $2(x+1) = 24cm$

Height = $(x-4) = 7cm$

Area = $\frac{1}{2} \times 24 \times 7 = 84cm^2$