

 MATHEMATICS

 EXEMPLAR ENTRY AT 11+

Name:

**READ THE FOLLOWING CAREFULLY:**

1. Calculators are NOT permitted.
2. You have 1 hour.
3. Total 70 marks

**1.** The table shows the number of competitors in the Olympic Games held in each of 6 cities.

|  |  |
| --- | --- |
| **City** | **Number of****competitors** |
| Munich | 7123 |
| Montreal | 6028 |
| Moscow | 5217 |
| Los Angeles | 6797 |
| Seoul | 8465 |
| Barcelona | 9367 |

(a) Which number in the table is the largest?

..............................................................

**(1)**

(b) Write down the value of the 2 in the number 5217

..............................................................

**(1)**

(c) Write the number 8465 correct to the nearest thousand.

..............................................................

**(1)**

(d) Which number in the table is a multiple of 4?

..............................................................

**(1)**

(e) Use a number from the table to make this calculation correct.

.............................................................. **÷ 3 = 1739**

**(1)**

**(Total for Question 1 is 5 marks)**

**2.** The bar chart shows information about the number of people in the world who had swine flu on each of the first 5 days of May 2009.



(a) How many people had swine flu on May 3rd?

..............................................................

**(1)**

(b) On which date did 658 people have swine flu?

..............................................................

**(1)**

(c) On May 6th, 1893 people had swine flu.

 Draw a bar on the bar chart to show this information.

**(1)**

**(Total for Question 2 is 3 marks)**

**3.** (a) Work out the number which is exactly halfway between 0.3 and 0.6

..............................................................

**(1)**

(b)



 What is the reading on the scale?

..............................................................

**(1)**

(c) Write down the value of the 3 in the number 0.243

.............................................................................................

**(1)**

(d) Write these numbers in order of size.

 Start with the smallest.

 0.18 0.08 0.2 0.06 0.1

..................................................................................

**(2)**

**(Total for Question 3 is 5 marks)**

**4.**



(*a*) The clock shows the time in the **afternoon** at which a train leaves Colombo for Kandy.

 Write down this time using the 12-hour clock.

................................

(1)

(*b*) The train arrives in Kandy at five to eight in the evening.

 On the clock face, draw hands to show a time of five to eight.



(1**)**

(c) Jamie’s piano exam starts at 10.47. It lasts 18 minutes.

 At what time does his exam finish?

 ..............................................................

**(2)**

(d) A train leaves Barton at 4.15 pm and arrives at Dedford at 19.10.

 How long is the train journey?

.......................hours...........................minutes

**(2)**

**(Total for Question 4 is 6 marks)**

**5.** Kali is drawing a pictogram to represent the number of DVDs he owns.

 He sorts his DVDs into different types.

**Key** represents 4 DVDs

|  |  |
| --- | --- |
| **Type of DVD** | **Number of DVDs** |
| Film |  |
| Music |  |
| Comedy |  |
| Wildlife |  |

**(a)** How many Music DVDs does Kali own?

................................

**(1)**

**(b)** How many more Film DVDs than Comedy DVDs does Kali own?

................................

**(2)**

**(c)** Kali owns 6 Wildlife DVDs.

 Complete the pictogram to show this information.

**(1)**

**(Total for Question 5 is 4 marks)**

**6 (a)** Simplify 3*m* + 4*m*

................................

**(1)**

 **(b)** Simplify fully ****

................................

**(1)**

 **(c)** Solve7*y* + 1 = 36

................................

**(2)**

**(Total for Question 6 is 4 marks)**

**7.**



From the numbers in the box, write down

(a) both the odd numbers,

..............................................................

**(2)**

(b) both the square numbers,

..............................................................

**(2)**

(c) both the prime numbers.

..............................................................

**(2)**

**(Total for Question 7 is 6 marks)**

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**8** (a)



 (i) What fraction of this shape is shaded?

 Give your fraction in its simplest form.

...............................

 (ii) Write your answer to part (i) as a decimal.

...............................

**(3)**

(b)



 (i) Shade 20% of this shape.

 (ii) What percentage of the shape is unshaded?

............................... %

**(2)**

**(Total for Question 8 is 5 marks)
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**9.**

 **kilometre millimetre metre centimetre**

 **centilitre kilogram gram litre**

1. Write down a sensible unit from the box above to measure
2. the length of a hand

 ..............................................................

**(1)**

1. the length of a ship

 ..............................................................

**(1)**

1. the mass of an apple

 ..............................................................

**(1)**

1. How many millimetres are equivalent to 1 metre?

 ..............................................................

**(2)**

**(Total for Question 9 is 5 marks)**

**10.** On the probability scale, mark with a cross (×), the probability that

 (i) you will have something to drink tomorrow.

 Label this cross **A**.

 (ii) a teacher chosen at random was born on a Monday.

 Label this cross **B**.



 (iii) a fair 6-sided dice will show an even number when thrown.

 Label this cross **C**.



**(Total for Question 10 is 3 marks)**

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**11.** There are 4 pears in a pack.

1. How many pears are there in 5 packs?

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**(1)**

1. There are 3 people in the Jones family.

Each person eats one pear every day.

1. How many pears will the Jones family eat in 7 days?

 ..............................................................

**(1)**

1. How many packs of pears will the Jones family need to buy to have enough pears for 7 days?

 ..............................................................

**(2)**

1. A pack of 4 pears costs £1.56.

Work out the cost of each pear.

..............................................................

**(2)**

**(Total for Question 11 is 5 marks)**

 **12.** (a) Write the number twenty thousand and forty six in figures.

..............................................................

**(1)**

 (b) Work out

1. 304 × 10

 ..............................................................

**(1)**

1. 5.1 × 100

 ..............................................................

**(1)**

1. 4.2 ÷ 10

 ..............................................................

**(1)**

1. 9080 ÷ 100

 ..............................................................

**(1)**

 (c) Two numbers add to make 9 and multiply to make 18.

 What are the two numbers?

 ..............................................................

**(2)**

**(Total for Question 12 is 7 marks)**

**13.** Here are some patterns made from sticks.



 Pattern number 1 Pattern number 2 Pattern number 3

(*a*) In the space below, draw Pattern number 4.

**(2)**

This rule can be used to work out the number of sticks in each pattern.

|  |
| --- |
| Multiply the Pattern number by 5 and then add 1 |

(*b*) Work out the number of sticks in Pattern number 6.

................................

**(2)**

(*c*) A pattern is made from 61 sticks.

 Work out the Pattern number.

................................

**(2)**

**(Total for Question 13 is 6 marks)**

**14.**

 **a)** Which factors of 360 are also multiples of 12?

..............................................................

**(1)**

 b) We know that 9 X 8 = 72. What is the value of 7200 ÷ 8000?

 ..............................................................

**(1)**

 c) What is the total of the first five prime numbers?

 ..............................................................

**(1)**

 d) What is the value of: 10 – 1 + 8 – 3 + 6 – 5 + 4 – 7 + 2 – 9?

 ..............................................................

**(1)**

 e) Find the value of 142 – 132 ?

 ..............................................................

**(1)**

**(Total for Question 14 is 5 marks)**

**END OF EXAMINATION**