

# The Regent Secondary School



## Mathematics Entrance Examination

### SPECIMEN PAPER B

Entry to Year 7



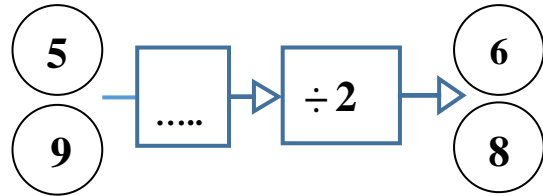
**Non-Calculator**

**Duration : 1 hour**

<p>1. Circle the number that is the same as?</p> $\frac{73}{100}$	<p>730                      0.73</p> <p>0.073                      73</p>
<p>2. Work out the missing number</p> $407 - \square = 169$	
<p>3. Round 54.73 to 1 decimal place</p>	
<p>4. How many zeros are there in the number <b>One million and six?</b></p>	
<p>5. New York is seven degrees warmer than Paris. If it is <math>-8^{\circ}\text{C}</math> in Paris, what is the temperature in New York?</p>	
<p>6. Give the input of the function machine if the <b>output is 24</b></p> <p>? <math>\rightarrow</math> <span style="border: 1px solid black; padding: 2px;">ADD 3</span> <math>\rightarrow</math> <span style="border: 1px solid black; padding: 2px;">Multiply by 3</span> <math>\rightarrow</math> 24</p>	

<p>7. Arrange the following numbers in descending order.</p> <p>4.305 , 4.4 , 4.27 , 4.0999</p>	
<p>8. What is the value of 3 in the number 72.375</p>	
<p>9. Work out</p> <p><math>7 - 9 - 3</math></p>	
<p>10. Work out</p> <p><math>125 \times 101</math></p>	
<p>11. Write any two other factors of 20 apart from 1.</p>	
<p>12. Subtract 0.11 from 3.3</p>	

13. A function machine has inputs of 5 and 9 resulting in outputs of 6 and 8. Fill in the missing operation.



14. Work out

$$(2)^5$$

15. Work out

$$\frac{5}{8} + \frac{1}{4}$$

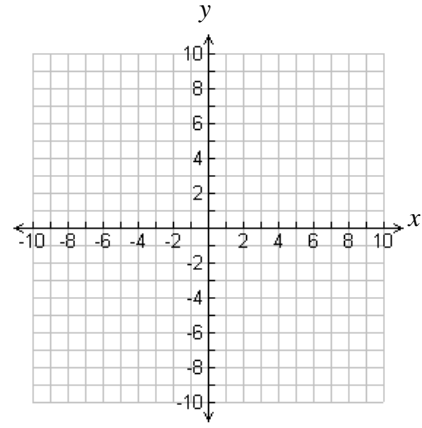
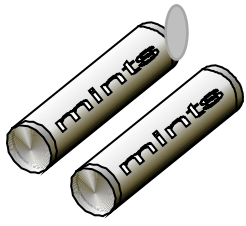
16. List all prime numbers bigger than 30 and less than 40

17. Find the highest common factor of 20 and 25.

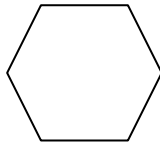
18. What is the answer to the calculation shown?

$$32 - 7 \times (5 - 2)$$

<p>19. A pie is made of 2 parts sugar to 3 parts flour. How many grams of flour will be needed if 12 grams of sugar is used to make the same kind of pie?</p>	
<p>20. In the decimal number shown, the digit 1 is in the <u>Thousand</u> position. What position is the digit 6 in?</p>	$\begin{array}{c} \underline{1}234.\underline{5}67 \\   \qquad \quad   \\ \text{Thousand} \quad \boxed{\phantom{000}} \end{array}$
<p>21. What is the next term of the sequence?</p>	<p>29, 23, 17, 11, .....</p>
<p>22. The number zero has been placed in one of the two boxes. Place a number in the other box in order in order to have a correct statement.</p>	$\boxed{\phantom{00}} > \boxed{0}$
<p>23. I think of a number. I multiply it by 4. If the result is 30, what is the number?</p>	

<p>24. Mark on the grid the point with the coordinate(- 4, - 6 ).</p>	
<p>25. What is the next term of the sequence?</p>	<p>20, 38, 56, 74, .....</p>
<p>26. I am thinking of a number. If I multiply it by 2 then subtract 5, I get 15. What number am I thinking of?</p>	
<p>27. John buys 2 packets of mints He eats <u>three</u> mints. If the number of <u>mints in a packet</u> is <u>k</u>, write an expression for how many mints John has left.</p>	 <p>..... mints</p>
<p>28. The pattern of symbols below is continuous. What will the <u>68<sup>th</sup></u> symbol in this pattern be ?</p> <p>* \$ % * \$ % * \$ % .....</p>	

29. Name the shape below



30. Name the triangle which has all sides equal.

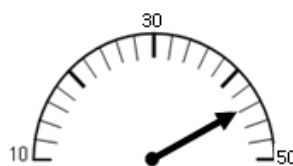
31. What is the general name for a SEVEN sided shape?

32. What is an appropriate unit for measuring the length of a football field?

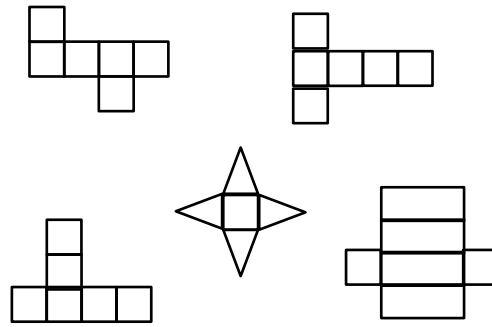
33. If the perimeter of this rectangle is 36cm, what is the height?



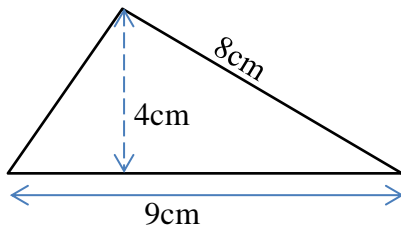
34. What number is being indicated on the scale?



35. Circle all the nets which do not make a cube.

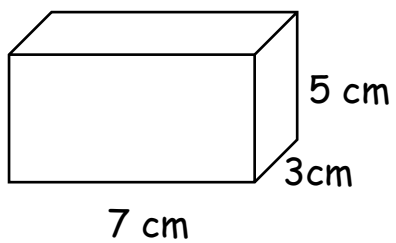


36. The height of the triangle below is 4cm. Calculate its area.



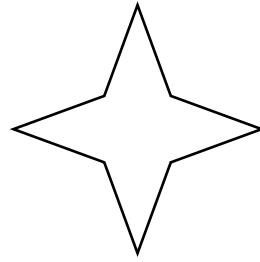
37. Convert 7.2 mm to centimeters.

38. Calculate the volume of this cuboid.

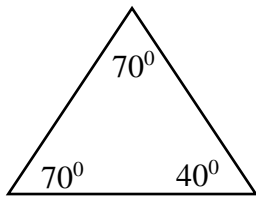




39. Draw all the lines of symmetry of the shape

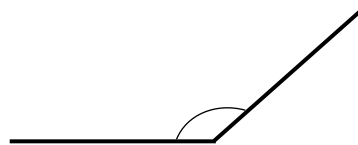


40. What type of triangle is this?

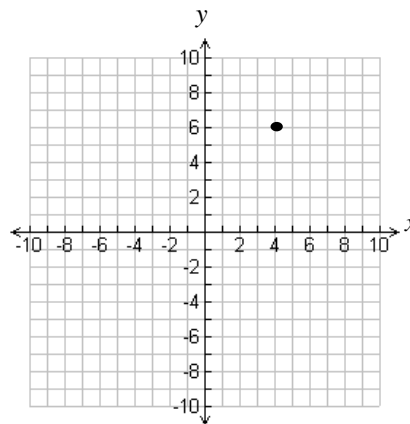


41. What type of angle is indicated in the diagram?

Acute , Reflex or Obtuse



42. Give the coordinate of the dot placed on the coordinate grid.



43. Name the Quadrilateral that has only one pair of parallel sides.

44. Circle the word which best describes the chance of any fair six-sided die landing on 3 when tossed?



Even                      Unlikely  
                                  Impossible  
 Likely                      Certain

45. The pictogram shows fan sales. On Wednesday 24 fans were sold. How many were sold on Tuesday?

Tue	
Wed	

46. What is the mean average of the numbers below?

6 , 2 , 2 , 2 , 3 , 1 , 4

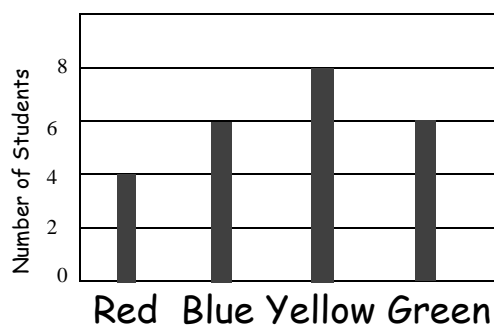
47. What is the median value of the numbers below?

6 , 2 , 2 , 2 , 3 , 1 , 4

48. What is the mode of the set of numbers below?

6 , 2 , 2 , 2 , 3 , 1 , 4

49. The chart shows the record of the favourite colours of all the students in a class.  
How many students are in the class?



50. For six months Sandra recorded the number of chocolates she sold.  
Between which two months did her **greatest rise** in sales occur?

