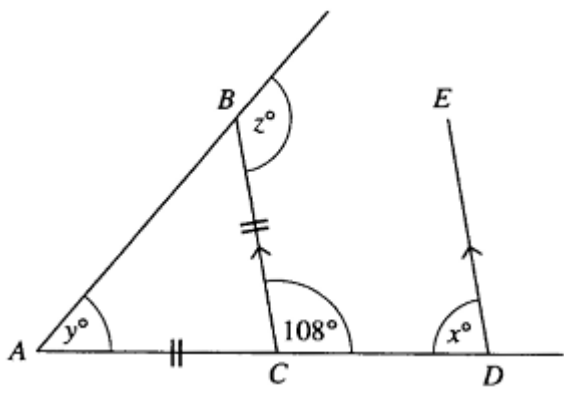


## SPECIMEN PAPER – APRIL 2016

## FORM 2 PAPER 2

|   |     |   |                  |
|---|-----|---|------------------|
| 1 | (a) | $10 \times 2 + 8 \div 4$  | Answer ..... [1] |
|   | (b) | $2\frac{4}{7} + \frac{1}{3}$  | Answer ..... [1] |
| 2 | (a) | Write down the place value of 3 in 5.238.   | Answer ..... [1] |
|   | (b) | Express 130000 centimeters into meters.   | Answer ..... [1] |
| 3 | (a) | When an empty container is filled with 320 g of milk powder, the total mass is 1.05 kg. What is the mass of the container in kilograms? | Answer ..... [1] |
|   | (b) | Given that $a = -3$ and $b = -6$ , find the value of $2a - b$ .   | Answer ..... [1] |

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| 4 | (i)  | Express 756 as the product of its prime factors.   |     |
|   |      | Answer .....   | [1] |
|   | (ii) | Find the smallest positive integer value of $n$ for which $756n$ is a multiple of 20.  |     |
|   |      | Answer .....   | [1] |
| 5 |      | Which is better?<br>Buy one 200g packet of cereal for Rs 40 <u>or</u> buy one 450g packet of the same cereal for Rs 85. Show your workings               |     |
|   |      | Answer .....   | [3] |
| 6 |      | $\xi = \{x : x \text{ is a whole number less than } 10\}$<br>$P = \{x : x \text{ is an even number}\}$ and<br>$Q = \{x : x \text{ is a factor of } 36\}$ |     |
|   | (a)  | List the elements of $P'$ .  |     |
|   |      | Answer .....   | [1] |

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|   | (b)   | List the elements of $P \cap Q$ .   |     |
|   |       | Answer .....  | [1] |
|   | (c)   | Find $n(P \cup Q)$ .  |     |
|   |       | Answer .....  | [1] |
| 7 |       | <p>In the diagram, ABC is a triangle with <math>AC=BC</math>. The point D is on AC produced and DE is parallel to CB. Given that angle <math>BCD = 108^\circ</math>, calculate</p>  |     |
|   | (i)   | $x$   |     |
|   |       | Answer .....  | [1] |
|   | (ii)  | $y$   |     |
|   |       | Answer .....  | [1] |
|   | (iii) | $z$   |     |
|   |       | Answer .....  | [1] |

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| 8 | (a) | Arrange the following numbers in descending order.<br>$-11, 12, 8, -6, 0, -1$ . |               | Answer ..... [1] |
|   | (b) | Solve $2x - 11 = -3$  |               | Answer ..... [1] |
|   | (c) | Find the number which is halfway between 0.4 and 3.2                            |               | Answer ..... [2] |
| 9 | (a) | Convert 5 m/s to km/h.  |               | Answer ..... [2] |
|   | (b) | Express the following ratios in their simplest form:                            |               |                  |
|   |     | (i)   | Rs55 : 50 cts | Answer ..... [2] |
|   |     | (ii)  | 400 g : 8kg   | Answer ..... [2] |

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|    |     | (iii)  | $\frac{3}{5} : 4\frac{2}{3}$ | Answer ..... [2] |
| 10 | (a) | Find the value of $x$ if $x : 14 = 7 : 12$ .                   |                              | Answer ..... [2] |
|    | (b) | Increase Rs 10 in the ratio 8 : 5.                             |                              | Answer ..... [2] |
|    | (c) | Decrease 660 in the ratio 5 : 11.                              |                              | Answer ..... [2] |
|    | (d) | What multiplying factor will convert 24 to 18.                 |                              | Answer ..... [2] |
|    | (e) | Given $a : b = 6 : 5$ and $b : c = 6 : 7$ , find $a : b : c$ . |                              | Answer ..... [3] |

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| 11 |  | a | Convert $\frac{63}{8}$ into a mixed number.<br><br>A $6\frac{3}{8}$<br>B $7\frac{7}{8}$<br>C $\frac{3}{8}$<br>D $7\frac{7}{8}$   | Answer ..... |
|    |  | b | Simplify $5x - 7x$ .<br><br>A $-2x$<br>B $2x$<br>C $-2$<br>D $2x^2$  | Answer ..... |
|    |  | c | Find the area of the trapezium shown below (not drawn to scale).<br><br><div data-bbox="758 840 1228 1108" data-label="Diagram"> </div><br>A $20 \text{ cm}^2$<br>B $36 \text{ cm}^2$<br>C $80 \text{ cm}^2$<br>D $320 \text{ cm}^2$ | Answer ..... |
|    |  | d | Find 45% of 400<br><br>A 1 800 000<br>B 0.1125<br>C 18 000<br>D 180  | Answer ..... |
|    |  | e | Change $\frac{3}{4}$ into a percentage.<br><br>A 34%<br>B 3%<br>C 4%<br>D 75%  | Answer ..... |

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|    |     | f   | Reduce 70 by 5%.  |  |
|    |     |     | A 3.5<br>B 73.5<br>C 66.5<br>D 350  |  |
|    |     |     | Answer .....  |  |
|    |     | g   | 4 workers took 10 days to do a job. How many days will 5 workers take to do the same job assuming that all workers work at the same rate. |  |
|    |     |     | A 12.5<br>B 20<br>C 10<br>D 8   |  |
|    |     |     | Answer .....  |  |
|    |     | h   | Convert 72km/min to m/s.  |  |
|    |     |     | A 72 000 m/s<br>B 1200 m/s<br>C 72 m/s<br>D 20 m/s  |  |
|    |     |     | Answer .....  |  |
|    |     | i   | Find the value of the smallest share when Rs 2 600 is divided in the ratio 1 : 2 : 3.   |  |
|    |     |     | A Rs 200<br>B Rs 1800<br>C Rs 800<br>D Rs 650   |  |
|    |     |     | Answer .....  |  |
|    |     | j   | The scale of a map is 1 : 5000. Find the actual length of a road, in kilometres, represented on the map by 4 cm.                          |  |
|    |     |     | A 100 000 km<br>B 1 km<br>C 5000km<br>D 20km  |  |
|    |     |     | Answer .....  |  |
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|    |     |     |   |  |
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| 12 | (a) |     | Express the following percentages as fractions in the simplest form:  |  |
|    |     | (i) | 5.8 %   |  |

8 | *Page Supporting Hardworking Learners*



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|    |   | (ii)  | How many bananas can be bought for Rs 45? |     |
|    |   |   | Answer .....                              | [2] |
|    | (b)   | Winners supermarket has allowed a discount of 5 % on soaps. If a soap is marked at Rs 15, how much would Dev pay for it?  |   |     |
|    |   |   | Answer .....                              | [2] |
|    | (c)   | Manav usually buys a 250 ml can of orange juice at lunchtime. One day the can is larger and is marked '20% extra'. How much orange juice does the larger can contain? |   |     |
|    |   |   | Answer .....                              | [2] |
| 15 | A shop buys an article at a cost of Rs 800. |   |   |     |
|    | (a)   | Find the percentage profit if the shopkeeper sells it for Rs 900.   |   |     |
|    |   |   | Answer .....                              | [3] |

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|    | (b) | OnsellinganarticleforRs18000,ashopkeepermakesalossof25%.Calculatedthecostpriceofthearticle.  |     |
|    |     | Answer .....   | [3] |
|    | (c) | ThepriceofanotebookincreasesfromRs60by25%.Findthesellingpriceofthenotebook.  |     |
|    |     | Answer .....   | [2] |
| 16 |     | Kenny lives 3km 500m from his school. He walks the first 0.5 km to his friend's place at an average speed of 3km/hr. Then both he and his friend walk the remaining distance at 5km/hr. Find |     |
|    | (a) | his time taken for the first 500 metres  |     |
|    |     | Answer .....   | [3] |
|    | (b) | the total time taken for the whole journey   |     |
|    |     | Answer .....   | [3] |
|    | (c) | the average speed for whole journey  |     |

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|    |     | <p>Answer ..... [3]</p>   |  |
| 17 |     | A computer stock opened at \$150 a share.   |  |
|    | (a) | Given that was a 20% increase in the share's price. What was the new price?   |  |
|    |     | <p>Answer ..... [3]</p>   |  |
|    | (b) | Next, there was a 20% decrease in the share's price. What was the final price?  |  |
|    |     | <p>Answer ..... [3]</p>   |  |
|    | (c) | What was the percentage change from the opening price to the final price? Indicate if the change was an increase or decrease.   |  |
|    |     | <p>Answer ..... [3]</p>   |  |
| 18 | (a) | A wholesaler of kitchen appliances offers a discount of 12% on the first \$10,000 worth of goods and 17% on additional goods. What would be the final cost of \$18,000 worth of appliances? Show your workings. |  |

|  |     |  |     |
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|  |     | <p>Answer .....</p>  | [4] |
|  | (b) | <p>Erica earns a salary of \$200.00 a week plus 15% commission on all sales. If the total sales for the week amounts for \$40000. What is her total salary for the week?</p> <p>Answer .....</p> | [3] |