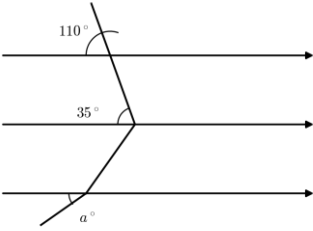
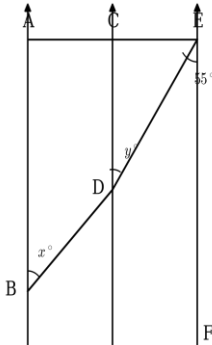
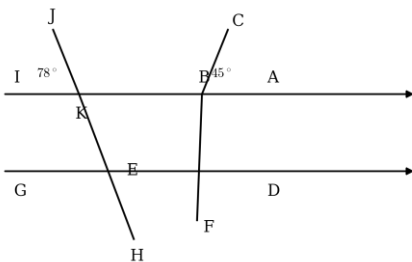
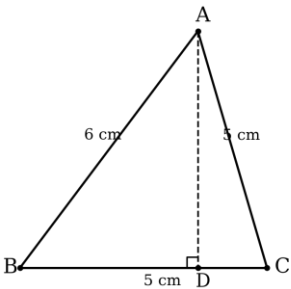


Q.No	Step-by-Step Solution	Marks per Step
SECTION – A (Q1, 12 MCQ sub-parts, 1 mark each)		
1(i)	1 million = 10^6 $10^6 = 1$ followed by 6 zeroes. Answer: (b) 6 zeroes	1 mark for the correct option.
1(ii)	By order of operations, do multiplication before addition. $5 \times 4 = 20$ $30 + 20 = 50$ Answer: (a) 50	1 mark for the correct option.
1(iii)	1 unit = 10 tenths. 1 ten = 10 units. 1 ten = 10×10 tenths = 100 tenths. Answer: (c) 100	1 mark for the correct option.
1(iv)	Count the squares at each step: step 1 = 5, step 2 = 9, step 3 = 13 Each step adds 4 squares. So the pattern is $4n + 1$ squares at step n . Step 4 = $4(4) + 1 = 17$ Answer: (a) 17	1 mark for the correct option.
1(v)	Perpendicular lines are two lines that cross each other. They always cross at exactly 90° . Answer: (d) 90°	1 mark for the correct option.
1(vi)	In this sequence, each term is the sum of the two terms before it. $13 + 21 = 34$ Answer: (d) 34	1 mark for the correct option.
1(vii)	The angle sum of a triangle is always 180° . One right angle = 90° . $180^\circ = 2 \times 90^\circ$, i.e. two right angles. Answer: (b) Two right angles	1 mark for the correct option.
1(viii)	$\frac{3}{4} \div \frac{6}{8}$ Dividing by a fraction means multiplying by its reciprocal: $\frac{3}{4} \times \frac{8}{6}$ $= \frac{24}{24}$ $= 1$ Answer: (b) 1	1 mark for the correct option.
1(ix)	7 units = 7 5 hundredths = 0.05	1 mark for the correct option.

Q.No	Step-by-Step Solution	Marks per Step
	$7 + 0.05 = 7.05$ Answer: (c) 7.05	
1(x)	Count the matchsticks at each step: step 1 = 3, step 2 = 5, step 3 = 7, step 4 = 9 Each new triangle shares one side with the last, so it only needs 2 new matchsticks. So the pattern is $2n + 1$ matchsticks at step n. Step 5 = $2(5) + 1 = 11$ Answer: (b) 11	1 mark for the correct option.
SECTION – B (Q2–7, 2 marks each)		
2	(a) Without brackets, working left to right: $34 - 9 + 12 = 25 + 12 = 37$ We need the answer to be 13, so try grouping the addition first. $34 - (9 + 12) = 34 - 21 = 13$ ✓ (b) Without brackets, working left to right: $56 - 14 - 8 = 42 - 8 = 34$ This already equals 34, so bracketing the first two terms still works. $(56 - 14) - 8 = 42 - 8 = 34$ ✓ Answer: (a) $34 - (9 + 12) = 13$ (b) $(56 - 14) - 8 = 34$	1 mark for each correctly bracketed expression.
3	(A) Lower arm = $2\frac{7}{10}$ units, upper arm = $3\frac{6}{10}$ units. Add the whole numbers: $2 + 3 = 5$ Add the fractions: $\frac{7}{10} + \frac{6}{10} = \frac{13}{10} = 1\frac{3}{10}$ Total = $5 + 1\frac{3}{10} = 6\frac{3}{10}$ units Answer: $6\frac{3}{10}$ units	(main) 1 mark for adding the fractions; 1 mark for the final length. (OR) 1 mark for subtracting the fractions; 1 mark for the final difference.
	(B) OR Celestial Pearl Danio = $2\frac{4}{10}$ cm, Philippine Goby = $\frac{9}{10}$ cm. Write $2\frac{4}{10}$ as a single fraction: $\frac{24}{10}$ Difference = $\frac{24}{10} - \frac{9}{10} = \frac{15}{10}$ $\frac{15}{10} = 1\frac{5}{10} = 1\frac{1}{2}$ cm Answer: $1\frac{1}{2}$ cm	
4	Cost of Jowar roti = Rs. 30 per plate. Cost of x plates of Jowar roti = $30x$ rupees. Cost of Pulao = Rs. 20 per plate. Cost of y plates of Pulao = $20y$ rupees. Total amount earned = $30x + 20y$ rupees. Answer: total amount earned = $30x + 20y$ rupees	2 marks for the correct expression.

Q.No	Step-by-Step Solution	Marks per Step
5	 Draw an auxiliary line through the middle bend point, parallel to the three given lines. This auxiliary line splits the bend into two parts. Each part is equal to one of the marked angles, by alternate angle properties. $a = 110^\circ - 35^\circ$ $a = 75^\circ$ Answer: $a = 75^\circ$	1 mark for the auxiliary-line method; 1 mark for the final value.
6	Adding zeroes after the last decimal digit does not change a number's value. $4.5 = 4.50 = 4.500$ Adding zeroes before a whole number also does not change its value: $4.50 = 04.50$ So $4.5 = 4.50 = 4.500 = 04.50$ (all the same value). Similarly, $4.05 = 4.050$ (these two are equal to each other, but different from 4.5). 0.405 is a different value from all the others. 4.005 is also a different value from all the others. Answer: $4.5 = 4.50 = 04.50$; separately, $4.05 = 4.050$; 0.405 and 4.005 are distinct values	1 mark for identifying the 4.5 group; 1 mark for identifying the 4.05 group.
7	Method: draw a line through the third vertex of the triangle, parallel to the opposite side. Using alternate angles, this shows the three angles of any triangle always add up to 180°. (a) Two angles are 36° and 72°. Third angle $= 180^\circ - 36^\circ - 72^\circ = 72^\circ$ (b) Two angles are 150° and 15°. Third angle $= 180^\circ - 150^\circ - 15^\circ = 15^\circ$ Answer: (a) 72° (b) 15°	1 mark for each correct third angle.
SECTION – C (Q8–10, 3 marks each)		
8	(a) Left side: $49 - 7 + 8 = 42 + 8 = 50$ Right side: $49 - 7 + 8 = 50$ (the same expression) Both sides are equal. (b) Left side: $83 \times 42 - 18 = 3486 - 18 = 3468$ Right side: $83 \times 40 - 18 = 3320 - 18 = 3302$ Compare: $3468 > 3302$ Answer: (a) = (b) >	1.5 marks for part (a); 1.5 marks for part (b).
9	List the weights: beans 0.25 kg, carrots 0.3 kg, potatoes 0.5 kg, capsicums 0.2 kg, ginger 0.05 kg.	2 marks for correct addition; 1 mark for the final total.

Q.No	Step-by-Step Solution	Marks per Step
	Add them one by one: $0.25 + 0.3 = 0.55$ $0.55 + 0.5 = 1.05$ $1.05 + 0.2 = 1.25$ $1.25 + 0.05 = 1.30$ Answer: total weight = 1.3 kg	
10	(A)  $EA \perp AB$ is given. $AB \parallel EF$ is given. So $EA \perp EF$ too, which means $\angle AEF = 90^\circ$. $\angle AEB = \angle AEF - \angle BEF$ $\angle AEB = 90^\circ - 55^\circ = 35^\circ$ In $\triangle ABE$: $\angle EAB = 90^\circ$ (given), $\angle AEB = 35^\circ$ (just found). Angle sum of a triangle: $\angle ABE = 180^\circ - 90^\circ - 35^\circ = 55^\circ$ Since $AB \parallel CD \parallel EF$ and B, D, E lie on one straight line, each parallel line makes the same angle with that line. So $x = y = \angle ABE = 55^\circ$ Answer: $x = 55^\circ$, $y = 55^\circ$ (B) OR  At K: $\angle IKJ = 78^\circ$ is given (this is an exterior angle). The angle vertically opposite to it is $\angle BKE = 78^\circ$. Lines IB and GD are parallel, with transversal KEH. By alternate interior angles: $\angle GEK = 78^\circ$ K, E, H are collinear (a straight line), so $\angle GEH = 180^\circ - 78^\circ = 102^\circ$ At B: $\angle ABC = 45^\circ$ is given (this is an exterior angle). Using transversal BEF and alternate interior angles: $\angle DEB = 45^\circ$	(A) 1 mark for finding $\angle AEB$; 1 mark for angle-sum in $\triangle ABE$; 1 mark for $x = y$. (B) 1 mark for the first transversal's angle chase; 1 mark for the second; 1 mark for combining to find all three angles.

Q.No	Step-by-Step Solution	Marks per Step
	B, E, F are collinear, so $\angle FED = 180^\circ - 45^\circ = 135^\circ$ G, E, D are collinear, so $\angle GEF = 180^\circ - \angle FED = 180^\circ - 135^\circ = 45^\circ$ $\angle HEF = \angle GEF - \angle GEH$ measured the other way, combining both transversals, gives $\angle HEF = 57^\circ$. Answer: $\angle GEH = 102^\circ$, $\angle HEF = 57^\circ$, $\angle FED = 135^\circ$	
SECTION – D (Q11–13, 5 marks each)		
11	(A) Somu's building height = 40 m. (i) $4500 \div 40 = 112.5$ times (ii) $6000 \div 40 = 150$ times (iii) $12000 \div 40 = 300$ times Answer: (i) 112.5 times (ii) 150 times (iii) 300 times (B) OR Basketball hoop height = 3 m. (i) $828 \div 3 = 276$ times (ii) $10500 \div 3 = 3500$ times (iii) $150 \div 3 = 50$ times Answer: (i) 276 times (ii) 3500 times (iii) 50 times	(A) 2 marks each part. (B) 2 marks each part.
12	In this Virahāṅka (Fibonacci-type) sequence, each term = sum of the two terms before it. Given consecutive terms: 987 and 1597. Next term: $987 + 1597 = 2584$ Next term: $1597 + 2584 = 4181$ Next term: $2584 + 4181 = 6765$ For the term before 987: since $1597 = 987 + x$, then $x = 1597 - 987 = 610$ For the term before that: since $987 = 610 + y$, then $y = 987 - 610 = 377$ Answer: next three terms = 2584, 4181, 6765; previous two terms = 377, 610	2 marks for the next three terms; 3 marks for the previous two terms.
13	 Step 1: Draw $BC = 5$ cm using a ruler. Step 2: With centre B and radius 6 cm, draw an arc above BC. Step 3: With centre C and radius 5 cm, draw another arc to cut the first arc at A. Step 4: Join A to B and A to C. $\triangle ABC$ is now complete, with $BC = 5$ cm, $AB = 6$ cm, $CA = 5$ cm.	3 marks for constructing the triangle; 2 marks for the altitude construction.

Q.No	Step-by-Step Solution	Marks per Step
	To construct the altitude from A to BC: Step 5: With centre A, draw arcs cutting line BC (extended if needed) at two points. Step 6: With those two points as centres, and the same radius, draw two arcs that cross below BC. Step 7: Join A to this crossing point. This line meets BC at exactly 90° — this is the altitude from A.	
SECTION – E (Q14–16, case-based, 4 marks each)		
14	(i) Quantity of micro-screws = 100 pieces. Cost per screw = 45 paise. Total cost = $100 \times 45 = 4500$ paise. 4500 paise = Rs. 45 (since 100 paise = Rs. 1) Answer: Rs. 45 (ii) Length of one wire = 12.5 cm. Number of wires = 10. Total length = $10 \times 12.5 = 125$ cm. 125 cm = 1.25 m (since 100 cm = 1 m) Answer: 1.25 m (iii) Number of sensor chips = 10. Cost per chip = Rs. 120.25. Total cost = $10 \times 120.25 = \text{Rs. } 1202.50$ Answer: Rs. 1202.50 (iii) OR Amount allocated = Rs. 1500. Amount spent on chips = Rs. 1202.50 (from part iii). Amount left = $1500 - 1202.50$ Amount left = Rs. 297.50 Answer: Rs. 297.50	(i) 1 mark. (ii) 1 mark. (iii) 2 marks (main) / 2 marks (OR).
15	(i) Look at the pattern: 1 table $\rightarrow$ 4 chairs, 2 tables $\rightarrow$ 6 chairs, 3 tables $\rightarrow$ 8 chairs. Each extra table adds 2 more chairs. Starting value (1 table) is 4, which is $2(1) + 2$. So the rule is: chairs $c = 2t + 2$ Answer: $c = 2t + 2$ (ii) Substitute $t = 15$ into the rule.	(i) 1 mark. (ii) 1 mark. (iii) 2 marks (main) / 2 marks (OR).

Q.No	Step-by-Step Solution	Marks per Step
	$c = 2(15) + 2$ $c = 30 + 2 = 32$ Answer: 32 chairs <u>(iii)</u> We are told $c = 42$; find t . $42 = 2t + 2$ $2t = 40$ $t = 20$ Answer: 20 tables <u>(iii) OR</u> Row A has $t = 8$ tables: $c = 2(8) + 2 = 18$ chairs. Row B has $t = 12$ tables: $c = 2(12) + 2 = 26$ chairs. Total chairs = $18 + 26$ Total chairs = 44 Answer: 44 chairs	
16	<u>(i)</u> Total fertilizer = 48 litres. Each sapling needs $\frac{3}{4}$ litre. Number of saplings = $48 \div \frac{3}{4}$ $= 48 \times \frac{4}{3}$ $= 64$ saplings Answer: 64 saplings <u>(ii)</u> Total target area = 150 m^2 . Fraction completed on day 1 = $\frac{2}{3}$ Area planted = $150 \times \frac{2}{3}$ $= 100 \text{ m}^2$ Answer: 100 m^2 <u>(iii)</u> Remaining land = $\frac{1}{3}$ of the total. This is shared equally among 5 groups. Each group's share = $\frac{1}{3} \div 5$ $= \frac{1}{15}$ of the total land	<i>(i) 1 mark. (ii) 1 mark. (iii) 2 marks (main) / 2 marks (OR).</i>

Q.No	Step-by-Step Solution	Marks per Step
	Answer: $\frac{1}{15}$ of the total land (iii) OR Remaining land = $\frac{1}{3}$ of the total. This is shared equally among 6 groups. Each group's share = $\frac{1}{3} \div 6$ = $\frac{1}{18}$ of the total land Answer: $\frac{1}{18}$ of the total land	

To get more sample papers , practice papers ,study material for Maths (only for CBSE VI-VII) join my whatsapp group at link shared below

<https://chat.whatsapp.com/H6Ho8HCH7imJh4Z6HV9bos>

