

SET	B
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INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION 2022
MATHEMATICS 041

CLASS:IX

Max.Marks: 80

MARKING SCHEME			
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP
	1	A	1
	2	D	1
	3	B	1
	4	B	1
	5	D	1
	6	B	1
	7	B	1
	8	A	1
	9	A	1
	10	D	1
	11	TRUE	1
	12	FALSE	1
	13	TRUE	1
	14	FALSE	1
	15	$0x + 1y - 4 = 0 \text{ or } 0x + 1y = 4$	1
	16	IRRATIONAL	1
	17	INFINITELY MANY	1

	18	IRRATIONAL	1
	19	(1,1)	1
	20	F	1
	21	$\frac{1}{\sqrt{10}} \times \frac{\sqrt{10}}{\sqrt{10}}$ $\frac{\sqrt{10}}{10}$ $\frac{10}{0.3162}$	1 $\frac{1}{2}$ $\frac{1}{2}$
	22	Any 4 correct rational numbers	$\frac{1}{2}$ each
	23	$x+0y-7=0$ $a=1, b=0, c=-7$	1 1
	24	$3x - 8 + x + 20 = 180$ (L.P) $4x = 168$ $x = 42$	1 $\frac{1}{2}$ $\frac{1}{2}$
	25	<p>Let equal side=x</p> $\frac{1}{2} \times base \times height = 8$ $\frac{1}{2} x^2 = 8$ $x = 4$ <p>Hypotenuse = $\sqrt{4^2 + 4^2} = \sqrt{32} = 4\sqrt{2}$</p> <p>Equal side = $\frac{14-6}{2} = 4$ $a=4, b=4, c=6$ $S=7$</p> <p>$Area = \sqrt{7 \times 3 \times 3 \times 1} = 3\sqrt{7}$</p>	1 1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 1 $\frac{1}{2}$
	26	$2^2 + 3^2$ $4 + 9$ 13	1 $\frac{1}{2}$ $\frac{1}{2}$
	27	$7 - (-5)$ 12 2 nd Quadrant 3 rd Quadrant	1 1 1 1
	28	$4x + 3y = 23$ $4(p) + 3(2p + 1) = 23$ $4p + 6p + 3 = 23$ $10p = 20$ $p = 2$ $x + y = 5$ $2x + 3y = 13$ (OR Any 2 correct equations)	1 $\frac{1}{2}$ $\frac{1}{2}$ 1 1
	29	Let the angles be x and 5x $x + 5x = 90$ $6x = 90$	1

	<p>$x = 15$ Angles are 15^0 and 75^0</p> <p>AD=AC Angle BAC=Angle BAD AB=AB $\Delta ABC \cong \Delta ABD$ (SAS) BC=BD (CPCT)</p>		<p>1 1 Fig-1/2 $1\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$</p>															
	<p>30 Number line Marking integers Drawing perpendicular Completing the right triangle Marking root 2 on number line</p>		<p>$\frac{1}{2}$ $\frac{1}{2}$ 1 $\frac{1}{2}$ $\frac{1}{2}$</p>															
	<p>31 $S - a = 8 \quad (1)$ $S - b = 7 \quad (2)$ $S - c = 6 \quad (3)$ $(1)+(2)+(3)$ $3S - (a+b+c) = 21$ $S = 21$ $\text{Area} = \sqrt{21 \times 8 \times 7 \times 6} = 84 \text{ cm}^2$ </p> <p> $3x+4x+5x=72$ $12x=72$ $x=6$ $a=18, b = 24, c=30$ $S = 36 \text{ cm}$ $\text{Area} = \sqrt{36 \times 18 \times 12 \times 6} = 216 \text{ m}^2$ </p>	<p>1 1 1 $\frac{1}{2}$ $\frac{1}{2}$ 1</p>																
	<p>32 Figure Given, To prove, Construction Proof Conclusion</p> <p>OR $\Delta AOD \cong \Delta BOC$ (AAS Congruence rule) $OA = OB$ (CPCT) Hence CD bisects AB.</p>		<p>$\frac{1}{2}$ 1 1 $\frac{1}{2}$ 2 $\frac{1}{2}$ $\frac{1}{2}$</p>															
	<p>33</p> <table border="1"> <tbody> <tr> <td>(i)</td> <td>D</td> <td>They have exact same size and same shape.</td> </tr> <tr> <td>(ii)</td> <td>A</td> <td>$\Delta ABC \cong \Delta XYZ$</td> </tr> <tr> <td>(iii)</td> <td>B</td> <td>SAS congruence rule</td> </tr> <tr> <td>(iv)</td> <td>B</td> <td>$50^0, 50^0$</td> </tr> <tr> <td>(v)</td> <td>D</td> <td>6 cm</td> </tr> </tbody> </table>	(i)	D	They have exact same size and same shape.	(ii)	A	$\Delta ABC \cong \Delta XYZ$	(iii)	B	SAS congruence rule	(iv)	B	$50^0, 50^0$	(v)	D	6 cm		1 Each
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