Mathematics

Q1) (d) Non-terminating non-repeating.

Q2) (d) always irrational

Q3) $\frac{1}{(\sqrt{7}-2)}\times\frac{(\sqrt{7}+2)}{(\sqrt{7}+2)} \Rightarrow \frac{\sqrt{7}+2}{7-2} \Rightarrow \frac{\sqrt{7}+2}{5}$ (c)

Q4) $0.1\overline{34} = x$

$\Rightarrow 1.\overline{34} = 10x \Rightarrow 134.\overline{34} = 1000x$

$\Rightarrow 134.\overline{34} - 1.\overline{34} = 1000x - 10x$

$\Rightarrow 133 = 990x$

$\Rightarrow x = \frac{133}{990}$ (c)

Q5) $0.6 + 0.\overline{7} + 0.4\overline{7} \Rightarrow$

$\Rightarrow 0.\overline{7} = x$

$\Rightarrow 7.\overline{7} = 10x \Rightarrow 7 = 9x \Rightarrow x = 7/9$

$\Rightarrow 0.4\overline{7} = x \Rightarrow 4.\overline{7} = 10x \Rightarrow 4.7\overline{7} = 100x$

$\Rightarrow 47.\overline{7} - 4.\overline{7} = 90x \Rightarrow 43 = 90x \Rightarrow x = \frac{43}{90}$

$\frac{43}{90} + \frac{7}{9} + \frac{6}{10} \Rightarrow \frac{43+70+54}{90} \Rightarrow \frac{167}{90}$ (a)

Q6) (b) 20° Q7) (b) 108° Q8) $120 + 2x = 180$

$\Rightarrow 2x = 60 \Rightarrow x = 30°$

Q9) (b) 40° Q10) $x + y + z = 180°$

$\Rightarrow x + y = 115°$

$\Rightarrow x - y = 25$

$\Rightarrow x = 25 + y \Rightarrow 25 + 2y = 115°$

$\Rightarrow 2y = 90 \Rightarrow y = 45°$

$x = 70°$

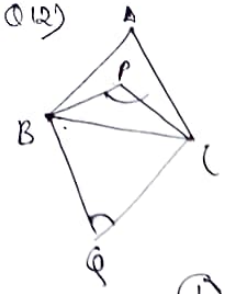
(a) 70, 45°

Q11) $4m + 5m = 108°$

$\Rightarrow m = \frac{108}{9} \Rightarrow 12°$

$\Rightarrow$ angles are $48, 60, 72°$ (a)

Q12)



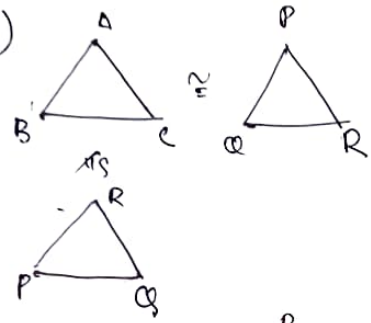
$\angle P = 90° + \frac{\angle A}{2}$

$\angle Q = 90 - \frac{\angle A}{2}$

$\Rightarrow \angle P + \angle Q = 90 + \frac{\angle A}{2} - \frac{\angle A}{2} + 90 \Rightarrow 180°$

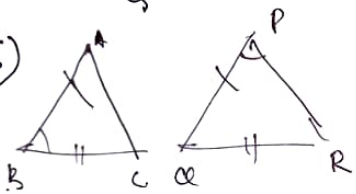
(b)

Q13)



(a) $BC = PQ$

Q14)

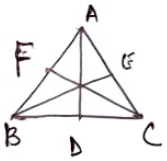


(a) S + A - S

Q15)

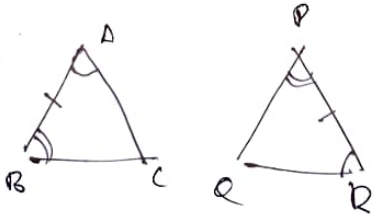
(a) S + A - S

Q16)



(d) equilateral $\triangle$

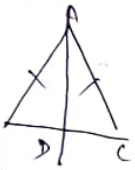
Q14)



(b) ASA.

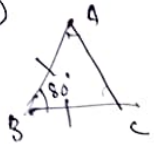
Q49) (d) 28

Q17)



(d) all the three altitudes are equal

Q18)



(c) 70°

Q19) (a) 0

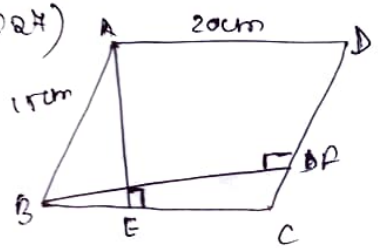
Q20) (d) II and IV Quadrants Q21) (b) II Quadrant

Q22) (a) on -ve direction of x axis

Q23) (b) (0, 4) Q24) (d) ~~of coordinates~~ (d)

Q25) (b) 13 cm Q26) (a) $\sqrt{32}$ ~~(Q27)~~

Q27)



$15 \times BF = 20 \times AG$

$\Rightarrow \frac{BF}{AG} = \frac{20}{15} = \frac{4}{3}$

$\Rightarrow$

$\Rightarrow$ ~~corresponding~~

(c) 3:4

Q28) (c) 1344 Q29) (b) 2:16 Q30) (c) 24 Vs

Q31) (a) $a \neq 0, b \neq 0$ Q32) (c) Infinitely many sol

Q33) (a) natural nos Q34) (a) 4 Q35) (a) (2, 0) Q36

Q37) (b) 20-30 Q38) (a) 11.20 Q39) (c) 5-8

Q40) (b) secondary data

Q41) (ii) $x - 3y = 0$ 42) (i) (4, 1) Q43) (iii) ₹5 Q44)

Q45) (iii) 2 Q46) (b) 9 Q47) (a) 180 Q48) (c) 18

Q49) (d) 28 Q50) (d) 31