

Mathematics Mega Quiz For RRB NTPC (Solutions)

S1. Ans.(c)

Sol.

$$A = \frac{20}{100}B, B = \frac{25}{100}C$$

$$A : B : C = 1 : 5 : 20$$

so, percent of C is equal to

$$A = \frac{1}{20} \times 100 = 5\%$$

S2. Ans.(d)

Sol.

$$\text{Speed of sound} = \frac{1.7 \times 1000}{25} = 68 \text{ m/sec}$$

S3. Ans.(b)

Sol.

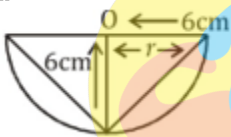
$$\text{Interest} = \frac{P \times r \times t}{100}$$

$$1080 = \frac{3000 \times 12 \times t}{100}$$

$$t = 3 \text{ years}$$

S4. Ans.(a)

Sol.



so, area of triangle

$$= 2 \times \frac{1}{2} \times \text{base} \times \text{height}$$

$$= 6 \times 6 = 36 \text{ m}^2$$

S5. Ans.(b)

Sol.

The ratio of three numbers

$$= 5 : 7 : 12$$

the sum of first and third

$$= 5 + 12$$

$$\text{so, } 17x = 7x + 50$$

$$\text{so, } x = 5$$

so, sum of all no.

$$= (5 + 7 + 12) \times 5 = 120$$

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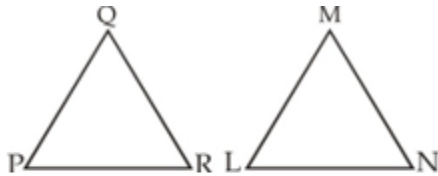
S6. Ans.(c)

Sol.

$$\text{Required \%} = \frac{150}{250} \times 100 = 60\%$$

S7. Ans.(d)

Sol.



given that, $3PQ = LM$

$$\frac{PQ}{LM} = \frac{1}{3}$$

& $MN = 9 \text{ cm}$

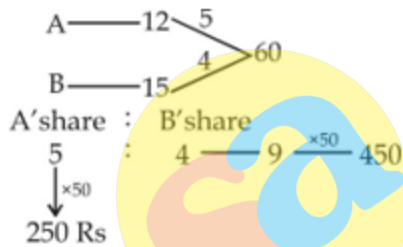
$$\text{so, } QR = \frac{MN}{3} = \frac{9}{3} = 3 \text{ cm}$$

S8. Ans.(b)

Sol. 3cm, 4cm, 5cm

S9. Ans.(c)

Sol.



S10. Ans.(a)

Sol.

$$M_1 \times D_1 = M_2 \times D_2$$
$$\therefore M_2 = \frac{36 \times 21}{14} = 54 \text{ Man}$$

S11. Ans.(c)

Sol. Ratio of efficiency of A and B = 2 : 3

So,

Ratio of time taken by A and B = 3 : 2 (because relation between efficiency and time is always reverse)

S12. Ans.(a)

Sol.

Let the numbers are $3x$ and $4x$

Then ATQ,

$$9x^2 + 16x^2 = 400$$

$$\therefore x = 4$$

So, Sum of numbers = $3x + 4x$

$$= x(3 + 4)$$

$$= 4 \times 7 = 28$$

S13. Ans.(c)

Sol.

$$R = \frac{P \times R \times R}{100} \Rightarrow P = \frac{R \times 100}{R \times R}$$
$$\Rightarrow P = \frac{100}{R}$$

S14. Ans.(a)

Sol.

ATQ

$$r_1 + r_2 = 7$$

$$\text{if } r_1 = 4$$

$$\text{Then } r_2 = 7 - 4$$

$$= 3 \text{ cm}$$

S15. Ans.(d)

Sol.



$AB \parallel CD$

And base AB is common to both ΔABC

So, $\Delta ABC = \Delta ABD$

S16. Ans.(c)

Sol.

ATQ

$$\text{Value of } (7-5)\% = 15$$

$$\text{So, } 100\% = \frac{15}{2} \times 100$$

$$= 750$$

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S17. Ans.(a)

Sol.

$$\text{Average difference} = \frac{64-46}{10} = 1.8$$

$$\text{So, Correct average} = 50 - 1.8 \\ = 48.2$$

S18. Ans.(c)

Sol.

Successive discount of 15% and 20%

$$= 15 + 20 - \frac{15 \times 20}{100} = 32\%$$

Successive discount of 32% and 25%

$$= 32 + 25 - \frac{32 \times 25}{100} = 49\%$$

S19. Ans.(b)

Sol.

$$\text{The ratio of cost price and selling price} = \frac{10}{11}$$

$$\text{So, profit} = \frac{11-10}{10} \times 100 = 10\%$$

S20. Ans.(b)

Sol.

The condition of triangle —

I. $a - b < c$

II. $a + b > c$

$$\Rightarrow 5 + 8 < 15$$

So, not satisfied the 'II' condition.

S21. Ans.(c)

Sol.

Let breath and length of a rectangle are 3 and 5 respectively.

Since perimeter of rectangle

= Perimeter of square

$$\Rightarrow 2(5 + 3) = 4a$$

$$\therefore \text{side of square} = 4$$

$$\text{Then } A = 16$$

$$\text{And } B = 15$$

$$\text{So, } A > B$$

Also, for same perimeters of two figures the figure with regular shape covers maximum area.

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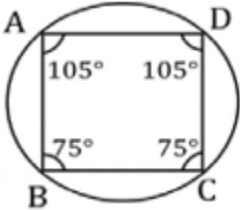
S22. Ans.(d)

Sol.

Required increase in area
 $= 10 + 10 + \frac{10 \times 10}{100} = 21\%$

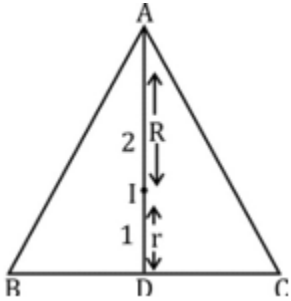
S23. Ans.(a)

Sol.



S24. Ans.(c)

Sol. 2 : 1



S25. Ans.(c)

Sol.

Let quotient be 1
so, number is = $56 + 29 = 85$
and when it is divided by 8 so,
remainder is 5.

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