

RRB RAILWAY

TEACHER 2025



**Unlimited
Re-Attempt**



350+
Previous Years' Papers



**Detailed
Solutions**



600+ Mock Test

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RRB Teacher General Maths Questions

- Q1. If $\left(\frac{-3}{2}\right)^{-3} \div x = \left(\frac{9}{4}\right)^{-2}$, then the value of $(2x + 5)^{-1}$ is
- (a) 2
 - (b) $\frac{1}{2}$
 - (c) $\frac{3}{2}$
 - (d) $\frac{2}{3}$
- Q2. If $a = 360$ and $b = 900$, then $(\text{LCM of } a \text{ and } b) \div (\text{HCF of } a \text{ and } b)$ is equal to
- (a) $\frac{5}{2}$
 - (b) 5
 - (c) 15
 - (d) 10
- Q3. If a 6-digit number $43x82y$ is divisible by 72, then what is the value of $(2x - y)$?
- (a) 8
 - (b) 10
 - (c) 12
 - (d) 14
- Q4. What is $\sqrt{1 + \sin 2\theta}$ equal to?
- (a) $\cos \theta - \sin \theta$
 - (b) $\cos \theta + \sin \theta$
 - (c) $2 \cos \theta + \sin \theta$
 - (d) $\cos \theta + 2 \sin \theta$
- Q5. A car is moving at the speed of 45 km/hr covers a certain distance in 4 hours. If the same distance is to be covered in 6 hours, then what will be the speed of the car?
- (a) 34 km/hr
 - (b) 30 km/hr
 - (c) 40 km/hr
 - (d) 36 km/hr
- Q6. If $5x - 6\left(x + \frac{1}{30}\right) = \frac{1}{3}(x + 1)$, then what is the value of $(5x + 6)$?
- (a) 3
 - (b) 4
 - (c) 5
 - (d) 7

- Q7. What is $\frac{\cot 54^\circ}{\tan 36^\circ} + \frac{\tan 20^\circ}{\cot 70^\circ}$ equal to?
- (a) 0
(b) 1
(c) 2
(d) 3
- Q8. After giving a discount of 15% on the marked price of an article, a shopkeeper still gains 19%. By what percent is the marked price above the cost price?
- (a) 30%
(b) 35%
(c) 38%
(d) 40%
- Q9. B and C alone can complete a work in 5 days and 15 days respectively. They began the work together but B left the work after some days and C completed the remaining work alone in 3 days. After how many days from the beginning B left the work?
- (a) 5 days
(b) 4 days
(c) 1.5 days
(d) 3 days
- Q10. The length of the diagonals of a rhombus are 24cm and 70cm. What is the length of a side of the rhombus?
- (a) 28 cm
(b) 35 cm
(c) 37 cm
(d) 47 cm
- Q11. The quadratic equation $x^2 + bx + 4 = 0$ will have real roots if
- (a) $b \leq -4$ only
(b) $b \geq 4$ only
(c) $-4 < b < 4$
(d) $b \leq -4, b \geq 4$
- Q12. In ΔABC , the bisectors of $\angle B$ and $\angle C$ meet at a point P. If $\angle BPC = 102^\circ$, then what is the measure of $\angle A$?
- (a) 22°
(b) 24°
(c) 28°
(d) 32°

- Q13.** A wire is in the shape of a circle of area 154 cm^2 . If it is bent in the form of a square, then what is the area of the square?
(Take $\pi = \frac{22}{7}$)
(a) 144 cm^2
(b) 169 cm^2
(c) 100 cm^2
(d) 121 cm^2
- Q14.** Find the largest number among $2^{65}, 3^{52}, 5^{39}, 7^{26}$
(a) 2^{65}
(b) 3^{52}
(c) 5^{39}
(d) 7^{26}
- Q15.** Which of the following numbers is divisible by 3 and 4 both ?
(a) 1716
(b) 1816
(c) 1713
(d) 1178
- Q16.** After joining as a chemist in a fire cracker production company, Meenu was told that to make a specific type of gun powder; Carbon, Sulphur and Pottasium Nitrate must to be mixed in the ratio 3 : 2 : 1. If 1.2 kg of gun powder is to be made, then how much Sulphur she should add ?
(a) 200g
(b) 300g
(c) 400g
(d) 600g
- Q17.** When Babu purchased a new Nissan Micra in 2020, its price was 5,00,000 /-. Every year, its price will decrease 4% from that years price. What will be its price (in rupee) in the year 2022 ?
(a) 4,80,000
(b) 4,60,800
(c) 4,60,000
(d) 5,60,800
- Q18.** A ten litre mixture consists of acid and water only. The acid is 60% in that mixture. If we want to make the percentage of water 25% in the mixture, then how much more acid has to be added to it ?
(a) 3L
(b) 4L
(c) 6L
(d) 7L

- Q19.** If $x + \frac{y}{2} = \frac{1}{4}$, $y + \frac{z}{2} = \frac{1}{4}$ and $z + \frac{x}{2} = \frac{1}{4}$, then the value of $x + y + z$ is:
- (a) $\frac{1}{4}$
 - (b) $\frac{1}{3}$
 - (c) $\frac{1}{2}$
 - (d) 1
- Q20.** If a and b are positive integers (a and $b \neq 0$) such that $a^b = 4913$, then $(a+b)^{a-b-14}$ is equal to :
- (a) 0
 - (b) 1
 - (c) 13
 - (d) 23
- Q21.** The measures of four angles of a quadrilateral are in the ratio of 1:2: 3 : 4. What is the measure of the smallest angle ?
- (a) 18°
 - (b) 20°
 - (c) 36°
 - (d) 72°
- Q22.** Two taps A and B can fill a tank alone in 6 hours and 9 hours respectively while a third tap C alone can empty the same tank in 18 hours. If all the three taps are opened together, then in how many hours the tank will be filled?
- (a) 4.5 hours
 - (b) 5 hours
 - (c) 3.5 hours
 - (d) 6 hours
- Q23.** In a rectangle ABCD, $AC = (2x + 3)$ cm and $BD = (3x - 5)$ cm. Then, value of $(2x + 09)$ is :
- (a) 8
 - (b) 16
 - (c) 25
 - (d) 27
- Q24.** Bisectors of angles B and C of a triangle ABC intersect at a point O. If $\angle BOC = 105^\circ$ then $\angle BAC$ is equal to:
- (a) 15°
 - (b) 30°
 - (c) 45°
 - (d) 50°

- Q25.** If x and y are respectively the supplement and complement of an angle 60° then value of $(x+y)$ is equal to :
- (a) 120°
 - (b) 185°
 - (c) 145°
 - (d) 150°
- Q26.** Area of a rhombus, whose diagonals are of lengths 12 cm and 25 cm, is :
- (a) 150 cm^2
 - (b) 100 cm^2
 - (c) 300 cm^2
 - (d) 75 cm^2
- Q27.** MORE is a trapezium in which as $MO \parallel RE$, $MO = 24$ units and $RE = 18$ units. If area of the trapezium is 336 square units, then the distance between MO and RE is :
- (a) 12 units
 - (b) 14 units
 - (c) 16 units
 - (d) 18 units
- Q28.** A gift box of cuboidal shape has to be covered by paper which costs ₹ 0.50 per square centimetre. If the box has dimensions 8cm X 3 cm X 5 cm, then the cost of the paper will be :
- (a) ₹ 158.00
 - (b) ₹ 79.00
 - (c) ₹ 316.00
 - (d) ₹ 790.00
- Q29.** The median of the observations 11, 12, 14, 18, $x+2$, 22, 22, 25 and 61, arranged in ascending order, is 21. Then, value of $3x+7$ is :
- (a) 50
 - (b) 57
 - (c) 64
 - (d) 67
- Q30.** A sum of Rs. 5600 is invested in a scheme of simple interest. It becomes Rs. 7000 in 5 years. How much will this sum become in 4 years?
- (a) Rs.6240
 - (b) Rs7800
 - (c) Rs.6720
 - (d) Rs.6700

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Solutions

S1 Ans.(b)

Sol.

$$\left(\frac{-2}{3}\right)^3 \div x = \left(\frac{4}{9}\right)^2$$

$$= -\frac{8}{27} \div x = \frac{16}{81}$$

$$\text{or, } -\frac{8}{27} = \frac{16}{81} \times x$$

$$\text{or, } -\frac{8}{27} \times \frac{81}{16} = x$$

$$\text{or, } x = -\frac{3}{2}$$

So, the value of $(2x + 5)^{-1}$

$$= \left(2 \times \left(-\frac{3}{2}\right) + 5\right)^{-1}$$

$$= \left(-\frac{6}{2} + 5\right)^{-1}$$

$$= (5 - 3)^{-1}$$

$$= (2)^{-1}$$

$$= \frac{1}{2}$$

S2. Ans.(d)

Sol.

LCM of a and b = 1800

HCF of a and b = 180

So,

$(\text{LCM of a and b}) \div (\text{HCF of a and b})$

$$\frac{1800}{180} = 10$$

S3. Ans.(a)

Sol.

According to the question, $43x82y$ is divisible by 72

Or, $82y$ is divisible by 8

Or, $y = 4$

Sum of the digits = $4 + 3 + x + 8 + 2 + 4 = 21 + x$

Now, $21 + x$ is divisible by 9

So, $x = 6$

Therefore, $(2x - y) = 2 \times 6 - 4 = 8$

S4. Ans.(b)

Sol.

$$\begin{aligned} \text{Consider, } & \sqrt{1 + \sin 2\theta} \\ &= \sqrt{\sin^2 \theta + \cos^2 \theta + 2 \sin \theta \cos \theta} \\ &= \sqrt{(\sin \theta + \cos \theta)^2} = \sin \theta + \cos \theta \end{aligned}$$

S5. Ans.(b)

Sol. distance = $45 \times 4 = 180 \text{ km}$

Now Speed = $180/6 = 30 \text{ km/hr}$

S6. Ans.(b)

Sol. $5x - 6x - \frac{6}{30} = \frac{x}{3} + \frac{1}{3}$

$$-x - \frac{1}{5} = \frac{x}{3} + \frac{1}{3}$$

$$x + \frac{x}{3} = -\frac{1}{3} - \frac{1}{5}$$

$$\frac{4x}{3} = -\frac{8}{15}$$

$$x = -\frac{2}{5}$$

$$5x + 6 = 5 \times -\frac{2}{5} + 6 = -2 + 6 = 4$$

S7. Ans.(c)

Sol.

$$\begin{aligned} \frac{\cot 54^\circ}{\tan 36^\circ} + \frac{\tan 20^\circ}{\cot 70^\circ} &= \frac{\cot (90^\circ - 36^\circ)}{\tan 36^\circ} + \frac{\tan (90^\circ - 70^\circ)}{\cot 70^\circ} \\ &= \frac{\tan 36^\circ}{\tan 36^\circ} + \frac{\cot 70^\circ}{\cot 70^\circ} = 1 + 1 = 2 \end{aligned}$$

S8. Ans.(d)

Sol.

$$\frac{MP}{CP} = \frac{100+p\%}{100-D\%} \text{ or, } \frac{MP}{CP} = \frac{119}{85} = \frac{7}{5}$$

Let, $MP = 7x$

So, $CP = 5x$

Here, Article is sold at MP

So, $SP = 7x$

Profit = $7x - 5x = 2x$

$P\% = 40\%$

S9. Ans.(d)

Sol. work rate of B = $1/5$ days and C = $1/15$ days

$$\text{Work completed by C in 3 days} = 3 \times \frac{1}{15} = \frac{1}{5}$$

$$\text{Work completed by B and C together} = 1 - \frac{1}{5} = \frac{4}{5}$$

B work done = x days

$$\left(\frac{1}{5} + \frac{1}{15}\right)x = \frac{4x}{15} = \frac{4}{5}$$

X = 3 days

S10. Ans.(c)

Sol.

$$\text{According to the question, } S = \frac{\sqrt{(24^2 + 70^2)}}{2} = \frac{74}{2} = 37$$

S11. Ans.(d)

Sol.

If root are real

$$b^2 - 4 \times 4 \geq 0$$

$$b^2 \geq 16$$

$$b \leq -4, b \geq 4$$

S12. Ans.(b)

Sol.

$$\text{Therefore, } \angle BPC = 90^\circ + \angle A/2$$

$$\text{Or, } \angle A/2 = 102 - 90$$

$$\text{Or, } \angle A/2 = 12^\circ$$

$$\angle A = 24^\circ$$

S13. Ans.(d)

Sol.

$$\text{The area of the circle} = \pi r^2 = 154$$

$$\text{Or, } 22/7 \times r^2 = 154$$

$$\text{Or, } r = 7 \text{ cm}$$

$$\text{Circumference} = 2\pi r$$

$$= 2 \times 7 \times 22/7$$

$$= 44$$

Circumference of circle is equal to the perimeter of square

$$4a = 44$$

$$\text{Or, } a = 11 \text{ cm}$$

$$\text{So, the area of the square} = 121 \text{ cm}^2$$

S14. Ans.(c)

Sol.

$$2^{5 \times 13}, 3^{4 \times 13}, 5^{3 \times 13}, 7^{2 \times 13}$$
$$= 32, 81, 125, 49 \quad (\text{powers are same})$$

Hence, 5^{39} is the largest number.

S15. Ans.(a)

Sol. For option 1716

Sum of digits: $1+7+1+6=15$

15 is divisible by 3 and last two digits 16

16 is divisible by 4.

S16. Ans.(c)

Sol. The total parts of the ratio: $3+2+1=6$ parts

Weight of one part = $1.2/6 \text{ kg} = 0.2 \text{ kg}$

Weight of Sulphur = $2 \times 0.2 \text{ kg} = 0.4 \text{ kg} = 400 \text{g}$

S17. Ans.(b)

Sol. Price in 2021:

Price in 2021 = Price in 2020 $\times (1 - 0.04)$

Price in 2021 = $5,00,000 \times 0.96 = \text{Rs. } 4,80,000$

Price in 2022

Price in 2022 = Price in 2021 $\times (1 - 0.04)$

Price in 2022 = $4,80,000 \times 0.96 = \text{Rs. } 4,60,800$

S18. Ans.(c)

Sol. Amount of acid in the initial mixture Acid = $0.60 \times 10 \text{ L} = 6 \text{ L}$

Amount of water in the initial mixture: Water = $0.40 \times 10 \text{ L} = 4 \text{ L}$

Let's assume x liters of acid is added

New total volume = $(10+x) \text{ L}$

New amount of acid: $(6+x) \text{ L}$

Percentage of water = $(\text{Amount of water} / \text{New total volume}) \times 100 = 25\%$

$$\frac{4}{10+x} = 0.25$$

$$4 = 0.25 \times (10+x)$$

$$4 = 2.5 + 0.25x$$

$$4 - 2.5 = 0.25x$$

$$1.5 = 0.25x$$

$$x = 6 \text{L}$$

S19. Ans.(c)

Sol.

$$x + \frac{y}{2} = \frac{1}{4}, y + \frac{z}{2} = \frac{1}{4} \text{ and } z + \frac{x}{4} = \frac{1}{4}$$

$$x + \frac{y}{2} + y + \frac{z}{2} + z + \frac{x}{2} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

$$\frac{3x}{2} + \frac{3y}{2} + \frac{3z}{2} = \frac{3}{4}$$

$$x + y + z = 1/2$$

S20. Ans.(b)

Sol.

$$a^b = 4913$$

$$(17)^3 = 4913$$

$$a=17 \text{ and } b = 3$$

$$(17 + 3)^{17-3-14} = (20)^0 = 1$$

S21. Ans.(c)

Sol. The measures of four angles of a quadrilateral = x, 2x, 3x and 4x

$$x + 2x + 3x + 4x = 360^\circ$$

$$10x = 360^\circ$$

$$x = 36^\circ \text{ (smallest angle)}$$

S22. Ans.(a)

$$\text{Sol. } \frac{1}{A} + \frac{1}{B} + \frac{1}{C} = \frac{1}{6} + \frac{1}{9} - \frac{1}{18} = \frac{3+2-1}{18} = \frac{4}{18} = \frac{2}{9}$$

$$\text{Time to fill the tank} = \frac{1}{\frac{2}{9}} = \frac{9}{2} = 4.5 \text{ hours}$$

S23. Ans.(c)

Sol. Given AC=2x+3 and BD=3x-5

Here diagonals are equal

$$2x+3=3x-5$$

$$x=8$$

$$2x+9=2(8)+9=16+9=25$$

S24. Ans.(b)

Sol.

$$\angle BOC = 90^\circ + \frac{1}{2}\angle BAC$$

Given $\angle BOC = 105^\circ$

$$105^\circ = 90^\circ + \frac{1}{2}\angle BAC$$

$$15^\circ = \frac{1}{2}\angle BAC$$

$$\angle BAC = 30^\circ$$

S25. Ans.(d)

Sol.

The supplement of an angle 60°

$$x = 180^\circ - 60^\circ = 120^\circ$$

The complement of an angle 60°

$$y = 90^\circ - 60^\circ = 30^\circ$$

$$x + y = 120^\circ + 30^\circ = 150^\circ$$

S26. Ans.(a)

Sol.

$$\text{Area of rhombus} = \frac{1}{2} \times d_1 \times d_2 = \frac{1}{2} \times 12 \times 25 = 150 \text{ cm}^2$$

S27. Ans.(c)

Sol.

$$\text{The area of a trapezium} = \frac{1}{2}(a + b)h$$

$$336 = \frac{1}{2}(24 + 18)h$$

$$672 = 42h \text{ Type equation here.}$$

$$h = 16 \text{ units}$$

S28. Ans.(b)

Sol. the surface area of a cuboid = $2(lb+bh+hl)$

$$S = 2(8 \times 3 + 8 \times 5 + 3 \times 5) = 2(24+40+15) = 2 \times 79 = 158 \text{ cm}^2$$

the cost of the paper required to cover the gift box = $158 \times 0.50 = \text{Rs. } 79$

S29. Ans.(c)

Sol. the median is the 5th observation $x + 2 = 21$ or $x = 19$

$$3x + 7 = 3 \times 19 + 7 = 57 + 7 = 64$$

S30. Ans.(c)

Sol. $SI = \frac{prt}{100}$

$$1400 = 5600 \times r \times \frac{5}{100}$$

$$R = 5\%$$

$$\text{Now } SI = 5600 \times 5 \times \frac{4}{100} = 1120$$

Total amount = Principal + Interest

$$\text{Total amount} = 5600 + 1120 = \text{Rs. } 6720$$



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