REET Maths Paper 1 Top 50 Questions PDF

Q1. Value of $(-3)^3 \times (0.3)^{-2} \times 0.01$ lies:
(a) between —2.5 and —2.25
(b) between 3 and 3.5
(c) between —3.5 and —2.5
(d) between 2.5 and 3.5

Q2. If A and B are digits such that

$$\begin{array}{r} 3\ A \\ +\ B\ 7 \\ \hline 6\ 2 \\ \hline \end{array}$$

then the value of twice of AB is :
(a) 52
(b) 102
(c) 104
(d) 54

Q3. Sum of all the factors of 6 (except itself) is equal to 6. Which of the following numbers depicts the same type of property ?
(a) 27
(b) 36
(c) 32
(d) 28

Q4. A square number is divisible by 6. Then, which of the following statements need not always be true about that square number ?
(a) Itis divisible by 36
(b) Its square root is divisible by 6
(c) Its square root is divisible by 3
(d) Itis divisible by 24

Q5. Which of the following numbers is divisible by 3 and 4 both ?
(a) 1716
(b) 1816
(c) 1713
(d) 1178

Q6. 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

Q7. 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

Q8. 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

Q9. 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) 1/4
(b) 1/3
(c) 1/2
(d) 1

Q10. 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

Q11. 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°

Q12. If a polyhedron has 6 faces and 12 edges, then number of its vertices is :
(a) 4
(b) 8
(c) 14
(d) 18

Q13. 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

Q14. Bisectors of angles B and C of a triangle ABC intersect at a point O. If ∠BOC=105° then ∠BAC is equal to:
(a) 15°
(b) 30°
(c) 45°
(d) 50°

Q15. 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°

Q16. 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) $75\ cm^2$

Q17. MORE is a trapezium in which as MO||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

Q18. 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

Q19. 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

Q20. Numbers 3, 4, 5, . . ., 47 are written on separate slips (one number on one slip) and are kept in a box. A slip is drawn from the box, without looking into it. What is the probability of getting a number divisible by 6 ?
(a) 7/44
(b) 7/45
(c) 8/45
(d) 9/44

Q21. $\frac{5}{2} - \frac{2}{5}$ is equal to
(a) $2\frac{1}{10}$
(b) $10\frac{1}{2}$
(c) $10\frac{1}{5}$
(d) $\frac{22}{10}$

Q22. The sum of the greatest 5-digit number and the smallest 3-digit number is
(a) 10098
(b) 10099
(c) 100098
(d) 100099

Q23. How many pieces of wire of length ¾ metres each can be cut from a roll of wire measuring 11 ¼ ?
(a) 15
(b) 12
(c) 11
(d) 10

Q24. (13 hundreds + 13 ones and 13 tens — one thousand) is equal to :
(a) 333
(b) 343
(c) 443
(d) 453

Q25. If 0.239 + 2.93 - 1.29 = 3.92 - k, then what should be added to k to make it 3 ?
(a) 0.995
(b) 0.949
(c) 0.849
(d) 0.959

Q26. What is the sum of the smallest common multiple and the biggest common factor of 60, 72 and 84?
(a) 1272
(b) 2532
(c) 2508
(d) 2544

Q27. Rama has only ₹ 50 and ₹ 100 notes with her. If the total number of notes she has is 25 and the amount of money with her is ₹ 1600, then the number of ₹ 50 and ₹ 100 notes with her are respectively
(a) 10 and 15
(b) 15 and 10
(c) 20 and 5
(d) 18 and 7

Q28. Savita reaches school for a meeting 15 minutes before 9:30 am. She reached half an hour earlier than her colleague who is 35 minutes late for the meeting. What is the scheduled time of the meeting ?
(a) 9:05 am
(b) 9:10 am
(c) 9:15 am
(d) 9:25 am

Q29. There are 28 rooms in a school and each room has 6 plants. Each plant needs 180 mL of water daily. If a bottle contains 840 mL water, then what will be the number of such bottles required to water all plants in the rooms for 3 days ?
(a) 108
(b) 112
(c) 115
(d) 118

Q30. Perimeters of a rectangle and a square are equal. Perimeter of the square is 48 cm and the breadth of the rectangle is 4 cm less than the side of the square. Then, the area of therectangle (in cm^2) is
(a) 128
(b) 96
(c) 256
(d) 512

Q31. Which of the following statements is true ?
(a) Sum of a positive number and a negative number is always zero
(b) Sum of two odd numbers is always an odd number
(c) Sum of two even numbers is always an even number
(d) Product of two prime numbers is always a prime number

Q32. Ascending order of the numbers 0.515, 0.5, 0.06, 0.52, 0.053 is :
(a) 0.5, 0.515, 0.52, 0.053, 0.06
(b) 0.053, 0.06, 0.5, 0.515, 0.52
(c) 0.053, 0.5, 0.515, 0.52, 0.06
(d) 0.06, 0.52, 0.515, 0.5, 0.053

Q33. Value $\sqrt{0.000081}$ is:
(a) 0.9
(b) 0.09
(c) 0.009
(d) 0.0009

Q34. The value of $(6^{-1} - 7^{-1})^{-1} - (2^{-1} - 3^{-1})^{-1} \div (-6)^{-1}$ "is:
(a) 6
(b) 41
(c) 43
(d) 78

Q35. Which of the following can be the HCF and LCM respectively of any two numbers?
(a) 21, 372
(b) 38, 342
(c) 488, 62
(d) 124, 4

Q36. If 60% of 400 +k% of 280 = 296, then the value of k is :
(a) 68/7
(b) 20
(c) 28
(d) 33

Q37. On subtracting (12a—9ab—2) from the sum of (4a —7ab—4b—5) and (a +3) (b—4), we get:
(a) 12a-3ab - b-15
(b) -12a+3ab-15
(c) - 12a+3ab –b -15
(d) - 12a -15ab - b-19

Q38. If 4 pipes of same type can fill a tank in 2 hours 15 minutes, then how much time will 5 pipes of same type take to fill the tank ?
(a) 1 hours 30 minutes
(b) 1 hours 48 minutes
(c) 1 hours 55 minutes
(d) 2 hours 5 minutes

Q39. In a class, ratio of number of boys to that of girls is 2 : 3. When three boys leave the class and 3 new girls join the class, the ratio becomes 3 : 7. How many girls were there in the class initially ?
(a) 6
(b) 10
(c) 12
(d) 18

Q40. If $x^4 + \frac{1}{x^4}$, $x > 0$, then the value of $(x - \frac{1}{x})$ is:
(a) $3\sqrt{3}$
(b) $\sqrt{21}$
(c) 5
(d) 7

Q41. How many triangles can be drawn having its angles as 30°, 40° and 110° ?
(a) One
(b) Two
(c) Infinitely many
(d) Zero

Q42. In ΔABC and ΔPQR, AB=3.1 cm, AC=4.5 cm, PR=3.1 cm, QR=4.5 cm, ∠PRQ=60° and ∠BAC=60". Which one of the following is true ?
(a) ΔABC≅ΔPQR
(b) ΔABC≅ΔRPQ
(c) ΔABC≅ΔPRQ
(d) ΔABC≅ΔRQP

Q43. In ΔABC, side BC is produced to point D and side CA is produced to point E. If ∠BAE = 115° and ∠ACD=104°, then which of the two angles ∠ABC and ∠BAC is larger and by how much ?
(a) ∠ABC, 39°
(b) ∠ABC, 13°
(c) ∠BAC, 26°
(d) ∠BAC, 65°

Q44. The sides of a triangle are 3 cm, 4 cm and (x +1) cm, where x is an integer. Then, x can take the value/values :
(a) From 0 cm to 6 cm
(b) From 1 cm to 6 cm
(c) From 1 cm to 5 cm
(d) Only 4 cm

Q45. Angles of a quadrilateral are in the ratio 3: 5:4: 6. Then, sum of the smallest and greatest angles of the quadrilateral is :
(a) 180°
(b) 170°
(c) 140°
(d) 160°

Q46. The length of a hall is 60 m, breadth is 32 m and height is 8 m. Area of one of its longer wall (in m^2) is :
(a) 240
(b) 256
(c) 480
(d) 1920

Q47. The volume $(\text{in } cm^3)$ of a cylinder, whose base diameter is 8 cm and height is 7/8 of the base radius, is : $(\text{use } \pi = \frac{22}{7})$
(a) 154
(b) 176
(c) 704
(d) 1408

Q48. The cost of painting a cube on all the faces at the rate of 3/- per cm^2 is 1,152/-. What is the length of its edge (in cm) ?
(a) 4
(b) 6
(c) 8
(d) 14

Q49. The median of numbers 10, 8, 2, 7, 3, 8, 5, 1 is k. If 10 is replaced by 1, then new median is r. The value of (k - r) is:
(a) –1.5
(b) 0
(c) 1
(d) 2

Q50. An integer is chosen from integers 1 to 100 at random. What is the probability that if is not divisible by 7 ?
(a) 17/20
(b) 22/25
(c) 7/50
(d) 43/50

Solutions

S1. Ans.(c)
Sol.

$$(-3)^3 \times (0.3)^{-2} \times (0.01)$$

$$-\frac{27}{0.09} \times 0.01 = -3$$

S2. Ans.(c)
Sol. A= 5 and B= 2
AB = 52 but twice of AB = 2 x 52 = 104

S3. Ans.(d)
Sol. The factors of 28 are: 1, 2, 4, 7, 14, 28.
Sum of the factors excluding 28
1+2+4+7+14=28
Thus, the number 28 satisfies the property that the sum of all its factors (excluding itself) equals the number itself. This type of number is known as a **perfect number**.

S4. Ans.(d)
Sol. It is divisible by 24
$n^2=(6k)^2=36k^2$
n^2 is divisible by 36 but not necessarily by 24.
For example, if n=6, $n^2=36$, which is not divisible by 24.

S5. 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.

S6. Ans.(c)
Sol. The total parts of the ratio: 3+2+1=6 parts
Weight of one part=1.2/6 kg=0.2 kg
Weight of Sulphur=2×0.2 kg=0.4 kg = 400g

S7. Ans.(b)
Sol. Price in 2021:
Price in 2021=Price in 2020×(1−0.04)
Price in 2021=5,00,000×0.96 = Rs.4,80,000
Price in 2022
Price in 2022=Price in 2021×(1−0.04)
Price in 2022=4,80,000×0.96 = Rs. 4,60,800

S8. Ans.(c)
Sol. Amount of acid in the initial mixture Acid=0.60×10 L=6 L
Amount of water in the initial mixture: Water=0.40×10 L=4 L
Let's assume x liters of acid is added
New total volume=(10+x) L
New amount of acid: (6+x) L
Percentage of water= (Amount of water/ New total volume)×100=25%

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

4=0.25×(10+x)
4=2.5+0.25x
4−2.5=0.25x
1.5=0.25x
x=6L

S9. Ans.(c)
Sol.

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

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

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

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

S10. Ans.(b)
Sol.

$$a^b = 4913$$

$$(17)^3 = 4913$$

a=17 and b = 3

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

S11. Ans.(c)
Sol. The measures of four angles of a quadrilateral = x, 2x, 3x and 4x
$x + 2x + 3x + 4x = 360°$
$10x = 360°$
$x = 36°$ (smallest angle)

S12. Ans.(b)
Sol. V−E+F=2
Given F=6 and E=12
6-12+F = 2
F = 2+6 = 8

S13. 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

S14. Ans.(b)
Sol.

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

Given $\angle BOC = 105°$

$105° = 90° + \frac{1}{2}\angle BAC$

$15° = \frac{1}{2}\angle BAC$

$\angle BAC = 30°$

S15. Ans.(d)
Sol.

The supplement of an angle 60°

$$x = 180° - 60° = 120°$$

The complement of an angle 60°

$$y = 90° - 60° = 30°$$

$$x + y = 120° + 30° = 150°$$

S16. Ans.(a)
Sol.

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

S17. Ans.(c)
Sol.

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

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

672 = 42h Type equation here.

$$h = 16\ units$$

S18. Ans.(b)
Sol. the surface area of a cuboid = 2(lb+bh+hl)

S = 2(8x 3 +8 x 5+ 3 x 5) = 2(24+40+15) = 2 x 79 = 158 cm^2

the cost of the paper required to cover the gift box = 158 x 0.50 = Rs. 79

S19. Ans.(c)
Sol. the median is the 5th observation x + 2 = 21 or x = 19
3x +7 = 3 × 19 + 7 = 57 + 7 = 64

S20. Ans.(b)
Sol. The total number of numbers = 47-3+1 = 45
The largest number in this range divisible by 6 = 42
the multiples of 6 from 6 to 42 = 6,12,18,24,30,36,42
Count the number of these multiples = 1,2,3,4,5,6,7

$$P = \frac{number\ of\ favorable\ outcomes}{total\ number\ of\ outcomes} = \frac{7}{45}$$

S21. Ans.(a)
Sol.

$\frac{5}{2} - \frac{2}{5} = \frac{25-4}{10} = \frac{21}{10} = 2\frac{1}{10}$

S22. Ans.(d)
Sol. Greatest 5 – digit number = 99999
Smallest 3 - digit number = 100
Sum = 99999 + 100 = 100099

S23. Ans.(a)
Sol.

Length of the wire = $11\frac{1}{4} = \frac{45}{4}$

Number of pieces of wire of length $\frac{3}{4} = \frac{45}{4} \times \frac{4}{3} = 15$

S24. Ans.(c)
Sol. 1300 + 13 + 130 – 1000
= 1443 – 1000 = 443

S25. Ans.(d)
Sol.
0.239 + 2.93 - 1.29 = 3.92 – k
⇒ k = 2.041
And 3 – 2.041 = 0.959
So, 0.959 should be added to k to make it 3.

S26. Ans.(b)
Sol. LCM of 60, 72 and 84 = 2520
HCF of 60, 72 and 84 = 12
Sum = 2520 + 12 = 2532

S27. Ans.(d)
Sol.
Let the number of ₹ 50 notes = x
Let the number of ₹ 100 notes = y
ATQ,
x + y = 25 .....(1)
50x + 100y = 1600 .....(2)
Solving equation (1) and eq (2)
X = 18 and y = 7

S28. Ans.(b)
Sol.
Savita reached school = 9:30 – 15 minutes = 9:15
Her colleague reached school = 9:45
Meeting time = 9:45 – 35 minutes = 9:10

S29. Ans.(a)
Sol.
Number of plants = 28 × 6 = 168
Water needed by all plants for one day = 168 × 180 = 30240 ml
Water needed by all plants for three days = 3 × 30240 = 90720 ml
840 ml water is contained = 1 bottle
90720 ml water is contained = $\frac{90720}{840}$ = 108 bottles

S30. Ans.(a)
Sol. Perimeter of square = 4a = 48
a = 12 cm
breath of the rectangle = 12 – 4 = 8 cm
ATQ,
2(l + 8) = 48
L = 16 cm
Area of rectangle = 16 × 8 = 128

S31. Ans.(c)

S32. Ans.(b)
Sol. Ascending order of the numbers 0.515, 0.5, 0.06, 0.52, 0.053 is 0.053, 0.06, 0.5, 0.515, 0.52.

S33. Ans.(c)

S34. Ans.(d)
Sol.

$$(6^{-1} - 7^{-1})^{-1} - (2^{-1} - 3^{-1})^{-1} \div (-6)^{-1}$$
$$= \left(\frac{1}{6} - \frac{1}{7}\right)^{-1} - \left(\frac{1}{2} - \frac{1}{3}\right)^{-1} \div \left(-\frac{1}{6}\right)^{-1}$$
$$= \frac{42}{1} - \frac{6}{1} \times \frac{(-6)}{1} = 78$$

S35. Ans.(b)
Sol.

S36. Ans.(b)
Sol.

$$\frac{60}{100} \times 400 + \frac{k}{100} \times 280 = 296$$
$$\Rightarrow 240 + \frac{14k}{5} = 296$$
$$\Rightarrow \frac{14k}{5} = 56$$
$$\Rightarrow k = 20$$

S37. Ans.(c)
Sol. sum of (4a —7ab—4b—5) and (a +3) (b—4)
= 4a —7ab—4b—5 + ab – 4a + 3b – 12 = - 6ab – b – 17
Now, - 6ab – b – 17 – (12a—9ab—2) = - 12a + 3ab -b - 15

S38. Ans.(b)
Sol. 4 pipes of same type can fill a tank = 2 hours 15 minutes
1 pipes of same type can fill a tank = 2 hours 15 minutes × 4 = 9 hours
5 pipes of same type can fill a tank = 9/5 hours = 1 hour 48 minutes

S39. Ans.(d)

Sol. Let the number of boys in the class = 2x

Let the number of girls in the class = 3x

When three boys leave the class and three new girls the class the new ratio will be

$\frac{2x-3}{3x+3} = \frac{3}{7} \Rightarrow 7(2x - 3) = 3(3x + 3)$

$\Rightarrow 14x - 21 = 9x + 9$

$\Rightarrow 5x = 30$

$\Rightarrow x = 6$

Girls in the class initially = $6 \times 3 = 18$

S40. Ans.(c)

S41. Ans.(c)

Sol. Sum of given angles = 30°+ 40° +110° = 180°

Sum of angles of a triangle = 180°

Hence, infinitely triangles can be drawn.

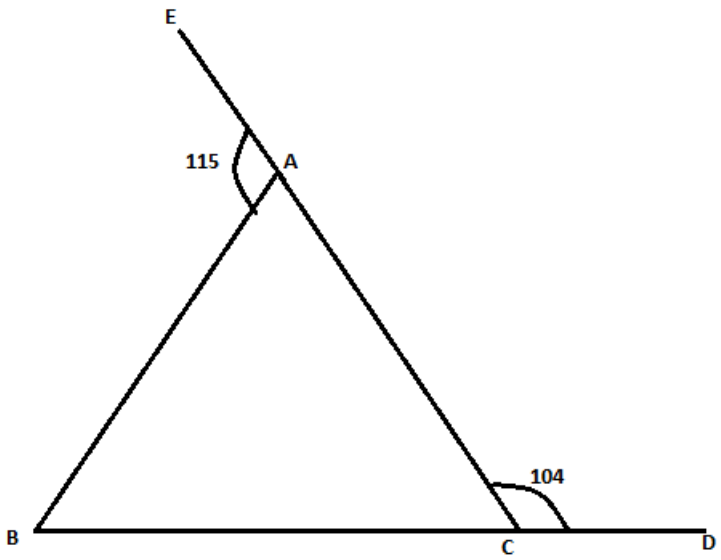
S42. Ans.(b)

Sol. Since given that ∠ BAC = ∠ PRQ = 60° and AC = QR = 4.5 cm

Now, if we compare the remaining sides AB = 3.1 cm and PR = 3.1 cm, then we can conclude that ΔABC ≡ ΔPQR by SAS (Side-Angle-Side) postulate.

S43. Ans.(c)

Sol.



∠BAC = 180° -115° = 65°

∠ACB=180° - 104° = 76°

∠ABC = 180° - (65° + 76°) = 39°

∠BAC - ∠ABC = 65° - 39° = 26°

S44. Ans.(c)
Sol. The sides of a triangle must satisfy the Triangle Inequality, which states that the sum of any two sides of a triangle must be greater than the third side.
In this case, we have: 3 + 4 > x + 1
7 > x + 1
x < 6

S45. Ans.(a)
Sol. Let the angles of a quadrilateral = 3x, 5x, 4x, 6x
We know that 3x + 5x + 4x + 6x = 360°
X = 20
Smallest angle 3x = 60°
Largest angle 6x = 120°
Sum = 60 + 120 = 180°

S46. Ans.(c)
Sol. Area of longer wall = 60 × 8 = 480

S47. Ans.(b)
Sol. Diameter = 8 cm
Radius = 4 cm
Height $= \frac{7}{8} \times 4 = \frac{7}{2}$
Volume $= \pi r^2 h = \frac{22}{7} \times 4 \times 4 \times \frac{7}{2} = 176$

S48. Ans.(c)
Sol.
Surface area of cube = $6a^2$
ATQ,
$3 \times 6a^2 = 1152$
$6a^2 = 64$
a = 8

S49. Ans.(d)
Sol. First we arrange the numbers in increasing order
1, 2, 3, 5, 7, 8, 8, 10
Median $k = \frac{5+7}{2} = 6$
If 10 is replaced by 1 then,
1, 1, 2, 3, 5, 7, 8, 8
Median $r = \frac{3+5}{2} = 4$
K – r = 6 – 4 = 2

S50. Ans.(d)
Sol. Integers divisible by 7 are 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98
So, integers between 1 to 100 not divisible by 7 are 100 – 14 = 86
Probability $= \frac{86}{100} = \frac{43}{50}$

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