REET Maths Paper 2 Top 50 Questions PDF

Q1. If 2/3 of 2/5 of 2/7 of a number is equal to 400, then what is the value of the number?
(a) 5250
(b) 1050
(c) 4570
(d) 3640

Q2. What is the value of $(2004)^2 - (2000)^2$?
(a) 16016
(b) 16012
(c) 16008
(d) 16020

Q3. What is the difference of the largest three digit number and the smallest two digit number?
(a) 990
(b) 989
(c) 988
(d) 900

Q4. A boy added all natural numbers from 1 to 10, however he added one number twice due to which the sum became 61. What is that number which he added twice?
(a) 6
(b) 2
(c) 1
(d) 4

Q5. If the average of 20, 24, 23, 19, P and Q is 25, then what is the average of P and Q?
(a) 31
(b) 37
(c) 32
(d) 35

Q6. If the radius of a circle is decreased by 10 percent, then what will be the percentage decrease in the area of circle?
(a)20 percent
(b)19 percent
(c)21 percent
(d)22 percent

Q7. An article is bought for Rs. 880 and is sold at 30 percent loss. What is the selling price of the article?
(a) Rs.616
(b) Rs.726
(c) Rs.656
(d) Rs.608

Q8. The ratio of P, Q and R is 6: 5: 9 respectively. If their sum is 400. then what is the difference between P and R?
(a) 100
(b) 60
(c) 80
(d) 70

Q9. 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

Q10. 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

Q11. 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

Q12. Length of the diagonal of a square is 40 cm. What is the area of this square?
(a) $400\sqrt{2}cm^2$
(b) 1600 cm^2
(c) 800 cm^2
(d) 400 cm^2

Q13. Length of a cuboid is thrice of its height. Breadth of cuboid is half of the sum of its height and length. If five times of the breadth is equal to 100 cm. then what is the total surface area of the cuboid?
(a) 900 cm^2
(b) 1800 cm^2
(c) 1100 cm^2
(d) 2200 cm^2

Q14. If $(5 + 3\sqrt{2})^2 = 43 + Q\sqrt{2}$, then what is the value of Q?
(a) 15
(b) 20
(c) 30
(d) 40

Q15. What is the value of $1^3 + 2^3 + \ldots\ldots 10^3$?
(a) 3025
(b) 2755
(c) 3315
(d) 2305

Q16. Which is the smallest three digit number which when increased by 6 becomes divisible by both 4 and 6?
(a) 112
(b) 114
(c) 116
(d) 102

Q17. The sum of a natural number and its positive square root is 182. What is the value of the number?
(a) 144
(b) 169
(c) 125
(d) 121

Q18. What is the value of positive square root of $54 + 14\sqrt{5}$?
(a) $3 + 2\sqrt{5}$
(b) $2 + 2\sqrt{5}$
(c) $8 + \sqrt{5}$
(d) $7 + \sqrt{5}$

Q19. If the ratio of marked price and selling price of an article is 3 : 2 respectively, then what is the discount percentage?
(a) 75 percent
(b) 33.33 percent
(c) 50 percent
(d) 60 percent

Q20. If P percent of P is 225, then what is the value of P2?
(a) 22500
(b) 22550
(c) 20500
(d) 20050

Q21. If 6/7 of 35 percent of a number is 330, then what is the number?
(a) 1100
(b) 1150
(c) 1200
(d) 1210

Q22. Suresh sells a car at the loss of 36 percent. What will be the ratio of cost price to selling price?
(a) 16 : 15
(b) 20 : 13
(c) 25 : 16
(d) 5 : 4

Q23. The angles of a triangle are in the ratio 7 : 6 : 5. What is the largest angle of the triangle?
(a) 90 degree
(b) 70 degree
(c) 105 degree
(d) 75 degree

Q24. Rs. 10000 is divided among P, Q and R in the ratio of 7 : 8 : 10 respectively. What is the share of Q?
(a) Rs. 2400
(b) Rs. 3200
(c) Rs. 2800
(d) Rs. 4000

Q25. What is that yearly rate of simple interest at which a sum of money becomes three times of itself in 40 years?
(a) 5 percent
(b) 5.60 percent
(c) 6 percent
(d) 7.5 percent

Q26. If Shyam is moving at the speed of 28 km/hr and he can cross a bridge in 6 minutes, then what is the length of the bridge?
(a) 2.2 km
(b) 2.8 km
(c) 3.2 km
(d) 2.6 km

Q27. A runner starts running from a point at 6:00 am at the speed of 5 km/hr. Second runner starts from the same point at 8:00 am in the same direction with a speed of 10 km/hr. At what time will the second runner will overtake the first runner?
(a) 10:00 am
(b) 12:00 pm
(c) 1:00 pm
(d) 11:00 am

Q28. 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

Q29. Length of the one diagonal of a rhombus is 30 cm. If the area of the rhombus is 300 cm^2, then what will be length of the other diagonal?
(a) 18 cm
(b) 25 cm
(c) 20 cm
(d) 15cm

Q30. Which of the following statement is correct?
I. If side of a cube is 45 cm, then total surface area of this cube is 12150 cm^2.
II. Radius of base and height of a cylinder are 7 cm and 12 cm respectively. Total surface area of this cylinder is 682 cm^2.
(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Q31. When we subtract one from the four digit least number, we get :
(a) The three digit least number
(b) The three digit greatest number
(c) The four digit greatest number
(d) A three digit number with unit digit 1

Q32. While teaching Class VI students, teacher explains that :
8 + 7=A Whole Number
8 x 7=A Whole Number
$\frac{7}{8}$ = Is not a Whole Number
Which property he/she explaining this way ?
(a) Additive inverse property
(b) Multiplicative inverse property
(c) Closure property
(d) Associative property

Q33. The least number which can be written in the form of n (n +1) (n+ 3), where n is a natural number, is :

(a) 6

(b) 8

(c) 7

(d) 3

Q34. If we multiply a fraction by itself and divide the product so obtained by its reciprocal, then the fraction so obtained is $18\frac{26}{27}$. The original fraction is :

(a) $2\frac{2}{3}$

(b) $\frac{8}{27}$

(c) $1\frac{1}{3}$

(d) $2\frac{5}{7}$

Q35. If $\frac{4}{3}$ of the difference of $2\frac{1}{4}$ and $1\frac{2}{3}$ is added to $\frac{1}{2}$ of the difference of $2\frac{1}{3}$ and $1\frac{2}{7}$, then result is :

(a) $\frac{63}{82}$

(b) $\frac{82}{63}$

(c) $-\frac{63}{82}$

(d) $-\frac{82}{63}$

Q36. The curved surface area of a right circular cylinder is one-third of its total surface area. If base radius of the cylinder is 8 cm, then volume of the cylinder (in cm^3) is :

(a) 256 π

(b) 128 π

(c) 288 π

(d) 144 π

Q37. The inner circumference of a 7 m wide circular race track is 440 m. Then, the radius of the outer circle is (Use $\pi = \frac{22}{7}$) :

(a) 63 m

(b) 67 m

(c) 77 m

(d) 79m

Q38. The areas of the curved surface and the base of a right circular cylinder are 'a' sq.cm and b' sq.cm respectively. The height of the cylinder (in cm) is :

(a) $\frac{22a}{\sqrt{\pi b}}$
(b) $\frac{a\sqrt{b}}{2\sqrt{\pi}}$
(c) $\frac{a}{2\sqrt{\pi b}}$
(d) $\frac{a\sqrt{\pi}}{2\sqrt{b}}$

Q39. Which of the following is a trinomial ?
(a) $3x^2 + 7$
(b) $x^3 + 10$
(c) $3x^2 + 3x + 7$
(d) $3x^3 + 3x^2 + 3x + 3$

Q40. The denominator of a rational number is greater than its numerator by 7. If the numerator is increased by 20 and the denominator is decreased by 3, the number obtained is $\frac{4}{3}$. Then, the rational number is ;
(a) $\frac{51}{44}$
(b) $\frac{44}{51}$
(c) $\frac{13}{20}$
(d) $\frac{4}{11}$

Q41. On selling an article for ₹3290, there is a loss of 6%. Then, cost price of the article is:
(1) ₹3230
(2) ₹3350
(3) ₹3490
(4) ₹3500

Q42. If sum of the expressions $-3x^3y^2 + 2x^2y^3$ और $— 5y^4 – 3x^2y^3$ is subtracted from $x^3y^2 + x^4 + x^2y^3 + y^4$ then the coefficient of y^4 in the result is-
(a)6
(b) -6
(c) 4
(d) -4

Q43. $\frac{15\,(x^2-2x-15)}{25(x+3)\,(x^2-25)}$ is equal to :
(a) $\frac{3}{5}(x+5)(x—3)$
(b) $\frac{3}{5}(x - 5)(x +3)$
(c) $\frac{3}{5(x-5)}$
(d) $\frac{3}{5(x+5)}$

Q44. "Which of the following is a Pythagorean Triplet, whose one member is 12 ?
(a) 8 12, 16
(b) 12, 35, 37
(c) 12, 35, 38
(d) 12, 35, 39

Q45. "How many edges does a polyhedron with 8 faces and 12 vertices have ?
(a) 14
(b) 16
(c) 18
(d) 22

Q46. Which of the following is true in case of an isosceles trapezium ?
(a) Only two adjacent sides are of equal length
(b) Only parallel sides are of equal length
(c) Only non-parallel sides are of equal length
(d) Both (a) and (c)

Q47. "Number of degrees (°) in three and one-half of a right angle is :
(a) 285
(b) 315
(c) 295
(d) 305

Q48. If the angles of a quadrilateral are in the ratio 1:2:3:4, then what is the measure of the greatest angle of the quadrilateral ?
(a) 72°
(b) 135°
(c) 144°
(d) 162°

Q49. If the mean of 10 numbers is 96 and one of the numbers is 150, then what is the mean of the remaining nine numbers ?
(a) 60
(b) 75
(c) 81
(d) 90

Q50. If a dice is thrown, then what is the probability of getting a prime number ?
(a) $\frac{3}{5}$
(b) $\frac{1}{2}$
(c) $\frac{2}{3}$
(d) $\frac{1}{3}$

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Solutions

S1. Ans.(a)
Sol. $\frac{2}{3} \times \frac{2}{5} \times \frac{2}{7} \times x = 400$
X = 5250

S2. Ans.(a)
Sol. $(2004)^2 - (2000)^2 = (2004 + 2000)(2004 - 2000) = 4004 \times 4 = 16016$

S3. Ans.(b)
Sol. (999-10) = 989

S4. Ans.(a)
Sol.1+2+3+4+5+6+7+8+9+10+x = 61
55+x = 61
X = 6

S5. Ans.(c)
Sol. (20+24+23+19+P+Q)/6 = 25
86+P+Q = 150
P+Q = 150-86 = 64
Average of (P+Q) = 32

S6. Ans.(b)
Sol. (-10%-10%+1%) = -19%

S7. Ans.(a)
Sol. $SP = 880 \times 70\% = Rs.616$

S8. Ans.(b)
Sol. P:Q:R = 6:5:9
6x+5x+9x = 400
20x = 400
X = 20
R-P = 9x-6x = 3x = 3 x 20 = 60

S9. Ans.(c)
Sol. SI = prt/100
$1400 = 5600 \times r \times \frac{5}{100}$
R = 5%
Now SI = $5600 \times 5 \times \frac{4}{100} = 1120$
Total amount=Principal+Interest
Total amount=5600+1120=6720

S10. Ans.(b)
Sol. distance = $45 \times 4 = 180\ km$
Now Speed = 180/6 = 30 km/hr

S11. Ans.(d)
Sol. work rate of B = 1/5 days and C = 1/15 days
Work completed by C in 3 days = $3 \times \frac{1}{15} = \frac{1}{5}$
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

S12. Ans.(c)
Sol. The area of square = $d_1 \times \frac{d_2}{2} = 40 \times \frac{40}{2} = 800\ cm^2$

S13. Ans.(d)
Sol. Accoding to question
$l = 3h, b = \frac{h+l}{2}\ and\ 5b\ = 100\ or\ b = 20\ cm$
$b = \frac{h+3h}{2}$= 4h/2 = 2h
Where 2h = 20
H = 10 cm
$l = 3 \times 10 = 30\ cm$
Total Surface Area=2(30×20+20×10+10×30)
Total Surface Area=2(600+200+300)
Total Surface Area=2(1100)=2200cm^2

S14. Ans.(c)
Sol. $\left(5 + 3\sqrt{2}\right)^2 = 43 + Q\sqrt{2}$
$25 + 18 + 30\sqrt{2} = 43 + Q\sqrt{2}$
$43 + 30\sqrt{2} = 43 + Q\sqrt{2}$
Q= 30

S15. Ans.(a)
Sol. $1^3 + 2^3 + \cdots \ldots \ldots + 10^3$
Sn = $\left(\frac{n(n+1)}{2}\right)^2 = \left(\frac{10(10+1)}{2}\right)^2 = (55)^2 = 3025$

S16. Ans.(d)
Sol. The LCM of 4 and 6 is 12.
From option (d)
102+6 = 108 divisible by 12

S17. Ans.(b)

Sol. Let's denote the natural number as xxx and its positive $\sqrt{x}$.

According to the question

$x + \sqrt{x} = 182$

From option (b) x = 169

$169 + \sqrt{169} = 169 + 13 = 182$

S18. Ans.(d)

Sol. $54 + 14\sqrt{5} = 49 + 5 + 2 \times 7 \times \sqrt{5} = (7 + \sqrt{5})^2$

Square root of $(7 + \sqrt{5})^2 = 7 + \sqrt{5}$

S19. Ans.(b)

Sol. MP = 3x and SP = 2x

$discount\% = \frac{3x-2x}{3x} \times 100 = \frac{x}{3x} \times 100 = 33.33\%$

S20. Ans.(a)

Sol. According to question

$P \times P\% = 225$

$P^2 = 22500$

S21. Ans.(a)

Sol. $\frac{6}{7} \times 35\% \times x = 330$

$\frac{5}{100} \times x = 55$

x = 1100

S22. Ans.(c)

Sol. Let the cost price (CP) of the car = x

SP = x – 0.36x = 0.64x

Ration of CP to SP = $\frac{x}{0.64x} = \frac{100}{64} = 25:16$

S23. Ans.(b)

Sol. The angles of a triangle are in the ratio 7 : 6 : 5.

7x+6x+5x = 180°

18x = 180°

x = 10°

the largest angles = 70°

S24. Ans.(b)

Sol. Q's share = $\frac{8}{25} \times 10000 = Rs.3200$

S25. Ans.(a)
Sol. A=P(1+rt)
the amount A is three times the principal P.
3P=P(1+rt)
Given t=40 years and A=3P
3P=P(1+40r)
2=40r
$r = \frac{1}{20} = .05 \times 100 = 5\%$

S26. Ans.(b)
Sol. Speed = distance/time
Given S = 28 km/hr and t = 6/60 hr = 0.1 hr
$28 = \frac{d}{0.1}$
d = 2.8 km

S27. Ans.(a)
Sol. D1 = Speed (of first runner) x Time (head start)
D1 = 5 km/hr x 2 hours = 10 km
Relative Speed = Speed (of second runner) - Speed (of first runner)
Relative Speed = 10 km/hr - 5 km/hr = 5 km/hr
T = Distance to Cover (by second runner) / Relative Speed T = 10/5 = 2 hours
Overtake Time = Start Time (of second runner) + Time to Overtake time = 8:00 am + 2 hours = 10:00 am

S28. Ans.(a)
Sol. $\frac{1}{A}+\frac{1}{B}+\frac{1}{C}=\frac{1}{6}+\frac{1}{9}-\frac{1}{18}=\frac{3+2-1}{18}=\frac{4}{18}=\frac{2}{9}$
Time to fill the tank $=\frac{1}{\frac{2}{9}}=\frac{9}{2}=4.5\ hours$

S29. Ans.(c)
Sol. $Area\ of\ rhomobus = \frac{1}{2}d_1d_2$
$300 = \frac{1}{2}(30)d_2$
$d_2 = 20\ cm$

S30. Ans.(a)
Sol. $a = 45\ cm$
Total surface of area = $6a^2 = 6(45)^2 = 12150\ cm^2$

S31. Ans.(b)
Sol. The correct answer is option (b) The three-digit greatest number
The four-digit least number is 1000. Subtracting one from this number gives us 999, which is the three-digit greatest number.

S32. Ans.(c)
Sol. The closure property states that for any two numbers in a set, the sum, difference, product, and quotient (if the divisor is not zero) are also in the set. In this case, the teacher is explaining that the sum, product, and difference of two whole numbers are also whole numbers, but the quotient of two whole numbers is not always a whole number.

S33. Ans.(b)
Sol. By putting n = 1
n (n+1) (n+3)
1 (1+1) (1+ 3)
= 1 (2) (4)
= 8

S34. Ans.(a)

S35. Ans.(b)

S36. Ans.(a)
Sol. The curved surface area of a right circular cylinder with base radius r and height h is given by $2\pi rh$. The total surface area of the cylinder is given by $2\pi rh + 2\pi r^2$.
We are given that the curved surface area of the cylinder is one-third of its total surface area, so we can write the equation:
$2\pi rh = (1/3)(2\pi rh + 2\pi r^2)$
Simplifying this equation, we get:
$3(2\pi rh) = 2\pi rh + 2\pi r^2$
$6\pi rh = 2\pi rh + 2\pi r^2$
$4\pi rh = 2\pi r^2$
$2h = r$
We are given that the base radius of the cylinder is 8 cm, so r = 8 cm. Substituting this value into the equation 2h = r, we get:
2h = 8 cm
h = 4 cm
Now we can find the volume of the cylinder using the formula:
Volume = $\pi r^2 h$
Volume = $\pi(8\text{ cm})^2$ (4 cm)
Volume = 256π cm^3
Therefore, the correct answer is (a) 256 π.

S37. Ans.(c)
Sol. Let's assume that the radius of the inner circle is 'r' meters.
Given that the inner circumference is 440 meters.
Therefore, $2 \times \frac{22}{7} \times r = 440$
$\Rightarrow r = 440 \times \frac{7}{44} = 70$ meters

The width of the circular race track is 7 meters.
Therefore, the radius of the outer circle is 70 + 7 = 77 meters
So, the answer is 77 meters.

S38. Ans.(c)

S39. Ans.(c)
Sol. A trinomial is an algebraic expression that consists of three terms. The terms in a trinomial can be monomials, binomials, or trinomials themselves.
Therefore, the only trinomial among the given options is (c) $3x^3 + 3x^2 + 3x + 3$.

S40. Ans.(b)

S41. Ans.(d)
Sol. CP = $\frac{SP}{100-Loss\ \%}$ x 100
= $\frac{3290}{94} \times 100$
= 3500

S42. Ans.(a)

S43. Ans.(d)

S44. Ans.(b)

S45. Ans.(c)
Sol. A polyhedron is a three-dimensional solid with flat faces. The formula for the number of edges in a polyhedron is E = F + V - 2, where E is the number of edges, F is the number of faces, and V is the number of vertices.
In this case, we are given that the polyhedron has 8 faces and 12 vertices. Substituting these values into the formula, we get:
E = 8 + 12 - 2
E = 18
Therefore, the polyhedron has 18 edges. The correct answer is (c).

S46. Ans.(c)
Sol. In an isosceles trapezium, the non-parallel sides (the legs) are of equal length. The other two sides (the bases) may or may not be equal in length. Therefore, option (c) is true and the other options are false. The correct answer is (c).

S47. Ans.(b)
Sol. A right angle is defined as an angle that measures 90 degrees. One-half of a right angle is equal to 90 degrees / 2 = 45 degrees.
Three and one-half of a right angle is equal to 3 right angles + 1/2 of a right angle = 3 * 90 degrees + 45 degrees = 270 + 45 = 315 degrees.
Therefore, the number of degrees in three and one-half of a right angle is 315. The correct answer is (b).

S48. Ans.(c)

Sol. Let the angles of the quadrilateral be represented by x, 2x, 3x, and 4x. Since the angles of a quadrilateral add up to 360 degrees, we can set up the equation:

x + 2x + 3x + 4x = 360

10x = 360

x = 36

Now, we can find the measure of the greatest angle by substituting x = 36 into the expression 4x:

4x = 4 x 36 = 144 degrees

Therefore, the greatest angle of the quadrilateral is 144 degrees. The correct answer is (c)

S49. Ans.(d)

Sol. Let x be the mean of the remaining nine numbers.

The sum of all 10 numbers is 10 * 96 = 960.

The sum of the remaining nine numbers is 9x.

Since one of the numbers is 150, we have:

9x + 150 = 960

9x = 810

x = 90

Therefore, the mean of the remaining nine numbers is 90.

S50. Ans.(b)

Sol. When a die is thrown, there are six possible outcomes: 1, 2, 3, 4, 5, or 6.

There are three prime numbers: 2, 3, and 5.

Therefore, the probability of getting a prime number when a dice is thrown is 3/6 = 1/2.