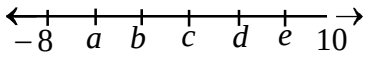
Q. 1. If the measure of an exterior angle of a regular polygon is greater than 50, what is the greatest number of sides it can have?
(1) 5 (2) 6 (3) 7 (4) 8

Q. 2. On the number line each mark is equally spaced between –8 to 10 and are represented by letters. Of these letters, which letter has the least positive value ?



(1) a (2) c
(3) b (4) d

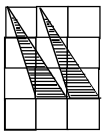
Q. 3. Which of the following expressions is equal to 2020?
(1) $(4^2 + 4)(10^2 + 1)$ (2) $(1^2 + 4)(20^2 + 1)$
(3) $(2^2 + 4)(30^2 + 1)$ (4) $(3^2 + 4)(20^2 + 1)$

Q. 4. Which of the following equation is satisfied by the four pairs of numbers listed in the table beside?

x	–2	0	2	3
y	–3	3	9	12

(1) $y = x^3 + 3$ (2) $y = 3x + 3$ (3) $y = x^2 + 6$ (4) $y = -3x + 6$

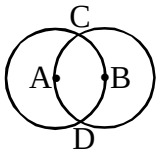
Q. 5. Squares of 1cm by 1cm are joined edge to edge to make the rectangle as shown. What is the area of the un-shaded portion of the figure?



(1) 9 sq. cm. (2) 3 sq. cm. (3) 6 sq. cm. (4) 10.5 sq. cm.

Q. 6. There are 400 students in Bishop`s School, where the ratio of boys to girls is 3 : 2.
There are 600 students in St. Mary`s School, where the ratio of boys to girls is 2 : 3.
When considering all the students of both the schools, the ratio of boys to girls is ?
(1) 3 : 2 (2) 2 : 3 (3) 12 : 13 (4) 1 : 1

Q. 7. Each of the two circles of equal radii with centres at A and B pass through the centres of one another.
If they cut at C and D then the angle DBC is equal to :



(1) 60^o (2) 120^o (3) 100^o (4) 140^o

Q. 8. In the sequence given below, the first term is 4 and each term after the first term is 7 more than the previous term. What is the 27th term of the sequence?
4, 11, 18, ...
(1) 112 (2) 193 (3) 186 (4) 190

Q. 9. On Monday Usha ran 3 miles in 25 minutes. If she runs for 45 minutes at this rate on Tuesday, how far did Usha run on Tuesday?
(1) 6.6 miles (2) 6.5 miles (3) 5.5 miles (4) 5.4 miles

Q. 10. What is the average of these fractions : $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ & $\frac{1}{6}$
(1) $\frac{5}{16}$ (2) $\frac{7}{24}$ (3) $\frac{5}{12}$ (4) $\frac{1}{15}$

Q. 11. Suresh starts a business with Rs.45000. Ramesh joins the business after 3 months with Rs.30000. In what ratio should they share the profit at the end of the year?
(1) 1 : 2 (2) 2 : 1 (3) 3 : 2 (4) 1 : 3

Q. 12. Solve the addition and subtraction sum given below:
1 + 2 – 3 – 4 + 5 + 6 – 7 – 8 + 9 + 10 – 11 – 12 + 13 +14 –15 ..... +301 +302 = ?
(1) 603 (2) 300 (3) 303 (4) 0

Q. 13. If $\frac{j}{k} = 32$ and $k = \frac{3}{2}$, then what is the value of $\frac{1}{2}$ j ?

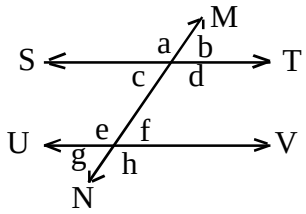
(1) 24 (2) 16 (3) 28 (4) 48

Q. 14. How many square pictures of side 20 cm can be pasted on a rectangular sheet of paper whose dimentions are 2m by 1m?
(1) 200 (2) 100 (3) 150 (4) 50

Q. 15. By what least number should you multiply 6300 to make is a perfect square?
(1) 10 (2) 7 (3) 5 (4) 9

Q. 16. What is the measure of an angle of a regular polygon of 12 sides?
(1) 120^o (2) 135^o (3) 140^o (4) 150^o

Q. 17. In the figure line ST is parallel to line UV and line MN is the transversal, then ∠c and ∠e are:
(1) consecutive interior angles (2) alternate interior angles
(3) vertical angles (4) corresponding angles



Q. 18. Arun completed $\frac{5}{8}$ th of a job in 10 days and leaves. Varun takes over the job and works at the same pace as Arun. How many days will Varun take to complete the job?
(1) 4 days (2) 5 days (3) 6 days (4) 7 days

Q. 19. Two years ago, the average age of a family of 5 members was 16 years. After a baby is born, the average age of the family is the same today. Find the present age of the baby.
(1) 4 years (2) 6 years (3) 8 years (4) 5 years

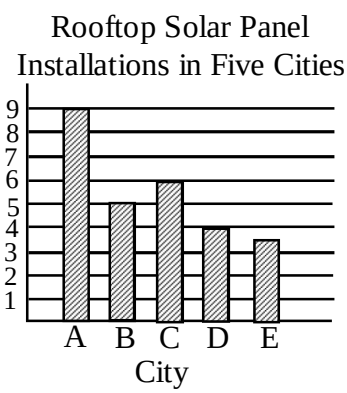
Q. 20. If Rs.4 becomes Rs.10 in 50 years at simple interest, the rate percent per annum is?
(1) 6% (2) 2% (3) 3% (4) 4%

Q. 21. Decorative paper costs Rs.60 per kg. What would be the expenditure to cover a cube of edge 10 m with this paper, if one kg. of paper covers 20 sq.m. area?
(1) Rs.1800 (2) Rs.3600 (3) Rs.2250 (4) Rs.2700

Q. 22. If Rs.460 amounts to Rs.640 by S.I in 6 years, what will it amount to in 2 years at the same rate %?
(1) Rs.580 (2) Rs.700 (3) Rs.500 (4) Rs.520

Q. 23. The number of rooftops with solar panel installations in 5 cities is shown in the graph besides. If the total number of installations is 27500, what is an appropriate label for the vertical axis of the graph?

(1) Number of installations (in tens)
(2) Number of installations (in hundreds)
(3) Number of installations (in thousands)
(4) Number of installations (in ten thousands)



Q. 24. Which of the following is true with respect to the graph given above?

(1) Solar panel in city A are 50% more than of city B
(2) Solar panel in city C are 50% more than of city D
(3) Solar panel in city A are 50% more than of city D
(4) Solar panel in city D are 50% more than of city B

Q. 25. The difference between the number of solar panel of which two cities is 500?

(1) A and B (2) C and B (3) A and D (4) D and E

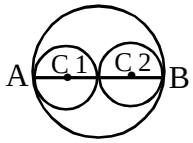
Q. 26. The five integers 2, 5, 6, 9 and 14 are arranged into a different order. In the new arrangement, the sum of the first three integers is equal to the sum of the last three integers. What is the middle number in the new arrangement?

(1) 6 (2) 2 (3) 9 (4) 14

Q. 27. Find the ratio of the speeds of a truck and a train, when the truck covers 550 m in 1 minute and the train covers 33 km in 45 minutes.

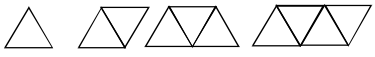
(1) 4 : 3 (2) 3 : 4 (3) 2 : 1 (4) 5 : 3

Q. 28. In the figure given besides AB is the diameter of the large circle. The centres C1 and C2 of the smaller circles are on AB. The two small circles are congruent and tangent to each other and to the larger circle. The circumference of the circle C1 is 8 π. What is the area ot the large circle?



(1) 64 π (2) 32 π (3) 16 π (4) 128 π

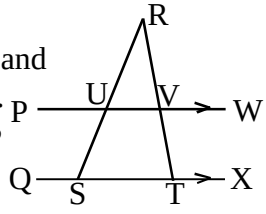
Q. 29. A sequence of figures is formed using tiles. Each tile is an equilateral triangle with side length 7 cm. The first figure consists of 1 tile. Each figure after the first is formed by adding one tile to the previous figure.
The first four figures are as shown:



How many tiles are used to form the figure in the sequence with perimeter 91 cm?

(1) 23 (2) 15 (3) 13 (4) 11

Q. 30. In the figure given besides PW is parallel to QX. S and T lie on QX, and U and V are points of intersection of PW with SR and TR respectively. If $\angle SUV = 120^o$ and $\angle VTX = 112^o$. What is the measure of $\angle URV$?



(1) 52^o (2) 56^o (3) 60^o (4) 64^o

Q. 31. A rectangular field has to be fenced on three sides leaving a side 20 feet uncovered. If the area of the field is 680 sq.ft., how many feet of fencing will be required?
(1) 82 ft. (2) 92 ft. (3) 95 ft. (4) 88 ft.

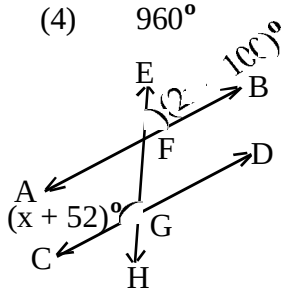
Q. 32. The cost of 80 apples is equal to the cost of 120 oranges. A man bought 60 apples and 75 oranges for Rs.1320. If you were to buy 25 apples and 40 oranges, how much would you pay?
(1) Rs.660 (2) Rs.620 (3) Rs.820 (4) Rs.780

Q. 33. Sum of the squares of two numbers is 145. If the square root of one number is 3, then the other number is?
(1) 136 (2) 12 (3) 8 (4) 64

Q. 34. The diameter of a cycle wheel is 14 cm. How much distance will it cover if it rotates 150 times.
(1) 440 m (2) 44 m (3) 60 m (4) 66 m

Q. 35. The exterior angle of a regular polygon is 40^o . What is the sum measure of all the angles of this polygon?
(1) 360^o (2) 720^o (3) 1260^o (4) 960^o

Q. 36. In the adjoining figure AB and CD are parallel and EH is a transversal, m∠ EFB is $(2x - 100)^o$ and m∠ CGF is $(x + 52)^o$. Find m∠ EFB
(1) 12^o (2) 52^o
(3) 72^o (4) 128^o



Q. 37. A fruit seller is selling bananas at Rs.36 per dozen. How much would you pay for 9 bananas?
(1) Rs.27 (2) Rs.26 (3) Rs.24 (4) Rs.30

Q. 38. The average of fifty numbers is 28. If two numbers, namely 25 and 35 are discarded, the average of the remaining numbers is nearly :
(1) 29.27 (2) 27.92 (3) 27.29 (4) 29.72

Q. 39. A bank offers 7% p.a. simple interest. What principal amount would you invest to get a monthly interest of Rs.210 ?
(1) Rs.24000 (2) Rs.36000 (3) Rs.18000 (4) Rs.72000

Q. 40. A tank whose length is 60 cm and breadth 30 cm contains water. A cubical steel box having edge of 30 cm is immersed completely in the tank. The water in the tank will rise by :
(1) 7.5 cm (2) 10 cm (3) 15 cm (4) 30 cm