Maths Mega Quiz

Q1. After dividing a number by 136 the remainder is obtained as 19. What will be the remainder when the same number is divided by 17?

(a) 2
(b) 15
(c) 13
(d) 4

Q2. If 5 × 10 × 15 ... × 95 × 100 is divisible by 5^n then what will be the maximum value of n ?

(a) 20
(b) 24
(c) 22
(d) 25

Q3. A person gave Rs. 500 to his eldest son. Then he gave 1/10 part of his total wealth to his second son and the amount of money received by his third son equal to the total amount received by his first and second son. How much money the person had?

(a) 1250
(b) 750
(c) 1000
(d) 250

Q4. The smallest number which when divided by 12, 15, 20 and 54 leaves a remainders 4 in each case is

(a) 536
(b) 454
(c) 540
(d) 544

Q5. A can complete a work in 12 days. B is 60% more efficient in work than A. How many days will B take to complete that work?

(a) 6
(b) $7\frac{1}{2}$
(c) 8
(d) $8\frac{1}{2}$

Q6. A pipe can fill a tank in 8 min and an another pipe can evacuate 6 kilolitre of water in 1 min. If both the pipe are opened together the empty tank fills in 20 min, the capacity of the tank is

(a) 50 kilolitre

(b) 60 kilolitre

(c) 75 kilolitre

(d) 80 kilolitre

Q7. The ratio of the present ages of the son, mother, father and the grandfather is 2 : 7 : 8 : 12 respectively. The average age of the son and the mother is 27 years. What will be the age of the mother 7 years later?

(a) 40 years

(b) 41 years

(c) 48 years

(d) 49 years

Q8. Running at a speed of 66 km/h a train A crosses a man sitting in train B running in the opposite direction at a speed of 60 km/h in 3 seconds. In what time will it cross an another man sitting in a train C running in the same direction at a speed of 36 km/h?

(a) $14\frac{1}{2}$ sec.

(b) $12\frac{3}{5}$ *sec.*

(c) $15\frac{2}{3}$ *sec.*

(d) $13\frac{2}{5}$ *sec.*

Q9. A boat takes 1 hour to go 15 km downstream. In return it takes 3 hours. How much time will it take to go 20 km in still water?

(a) 2 hours

(b) 1 hours 24 min

(c) $2\frac{1}{2}$ hours

(d) 3 hours

Q10. The average of the first four numbers among five given numbers is 26 and the average of the last four number is 25. What is the difference between the first and the last number?

(a) 1

(b) 4

(c) 5

(d) 16

Q11. As the NCF 2005 emphasizes that school education must be Linked with life outside the school and learning is joyful. Having had this in mind which of the following opportunity are provided to students?

(a) discussion with peers and teachers

(b) Brain storming session

(c) Collecting information from different sources

(d) All of the above

Q12. Which of the following is the main goal of mathematics education?

(a) development of children's ability of mathematization of their ideas

(b) development of children's ability of calculation.

(c) both (a) and (b)

(d) None of these

Q13. Which of the following teaching Aids are appropriate for the students for making students familiar to the symbols and for memorization of basic formula?

(a) Manipulatives

(b) Computers and Television

(c) Programmed Learning Material (PLM)

(d) Charts

Q14. Which of the following Activity can be used for clearing students concepts like profit and loss, simple and compound Interest?

(a) Projects

(b) Role Play

(c) Mathematics Clubs

(d) discussion

Q15. Which of the following number of factors need to considered while making use of a particular method and pedagogic resources?

(a) Availability of resources

(b) learners Capabilities

(c) Teacher's own preparation and mastery

(d) All of the above

SOLUTIONS

S1. Ans.(a)
Sol.
$\frac{136x+19}{17}=$
Reminder $=2$

S2. Ans.(b)
Sol. $5 \times 1 = 5, 5 \times 2 = 10, \ldots\ldots\ldots 5 \times 20 = 100$ means from 5, 10, 15, to 200 there will be 20 multipliers of 5 but 5 occurs. Twice in 25, 50, 75 and 100. So, there will be a total of 24 parts of 5. Means the max. Value of n will be 24.

S3. Ans.(a)
Sol.
$\{500 + (\text{total amount} \times \frac{1}{10}\} \times 2 = \text{total money}$
So, total amount $= 1250$

S4. Ans.(d)
Sol. (LCM of 12, 15, 20, 54)+4=544

S5. Ans.(b)
Sol.
Ratio of work efficiency $= 100 : 160 = 5 : 8$
Time taken by B $= 12 \times \frac{5}{8} = 7\frac{1}{2}$ day

S6. Ans.(d)
Sol.
A.T.Q. $\frac{x}{8} - \frac{48}{8} = \frac{x}{20} \Rightarrow x = 80$ kiloliter.

S7. Ans.(d)
Sol.
$2x + 7x = 27 \times 2$
$x = 6$
7x6+7=49

S8. Ans.(b)
Sol.
Relative speed $= 66 + 60 = 126$ km/h. $= 35$ m/s.
Length = (relative speed) × time
$L = 35 \times 3 = 105$ m
The relative speed of train A and C $= 66 - 36 = 30$ km/h. $= \frac{25}{3}$ m/s.
Req. time $= \frac{105}{\frac{25}{3}} = 12\frac{3}{5}$ sec.

S9. Ans.(a)
Sol.

speed of boat in still water $= \frac{15}{2}\left(1+\frac{1}{3}\right) = \frac{15}{2} \times \frac{4}{3} = 10$ km/h.

Req. time $= \frac{20}{10} = 2$ hour

S10. Ans.(b)
Sol.

$A + B + C + D = 26 \times 4 = 104$ _____ (i)
$B + C + D + E = 25 \times 4 = 100$ _____(ii)
$A - E = 4$

S11. Ans.(d)
S12. Ans.(a)
S13. Ans.(d)
S14. Ans.(b)
S15. Ans.(d)