## RRB NTPC

Previous Years' Arithmetic Questions

Part VI
Mixture \& Alligations, Prob. on Ages \& Remainder Theorem

1. A shop keeper purchased 15 kg of sugar and 20 kg of wheat of Rs. 50 and Rs. 75 per kg. respectively. On selling then he gained $10 \%$ on sugar and $20 \%$ on wheat. What was the total sale value?
A. Rs. 2,550
B. Rs. 2,625
C. Rs. 1,800
D. Rs. 1,575

Sol. Total sale value
$=15 \times 50 \times \frac{110}{100}+20 \times 75 \times \frac{120}{100}$
$=825+1800=2625$
2. How much quantity of water must be added to 48 ml of alcohol to make a solution that contain $25 \%$ alcohol?
A. 48
B. 64
C. 144
D. 192

Sol. Let Total solution be 100\%
Alcohol = 25\%, Water = 75\%
We have,
48: $x=25: 75$

$$
x=\frac{48 \times 75}{25}=144 \mathrm{ml}
$$

Hence, option C is correct.
3. There is $6 \%$ of sugar in a 5 litre mixture of sugar. Out of it 1 litre water vapourises. Find the percentage of sugar in the remaining mixture?
(A) $5 \%$
(B) $7.5 \%$
(C) $6 \%$
(D) $4 \%$
A. (C)
B. (D)
C. (B)
D. (A)

Sol. Sugar in the initial mixture $=6 / 100$ $\times 5=0.3$
Now since 1 Itr water vaporises
So percentage of sugar in final mixture $=$ $0.3 / 4 \times 100=7.5 \%$
4. A vessel contains 240 litres of mixture containing milk and water in the ratio of 5: x, respectively. 48 litres of mixture is taken out from this vessel and put into another vessel $P$. When 12 litres of water is added in vessel $P$ then ratio of milk to water is found to be 2: 1, respectively. Find the value of $x$.
A. 1
B. 5
C. 3
D. 2

Sol. Amount of milk in 48 litres of mixture $=\frac{5}{5+x} \times 48=\frac{240}{5+x}$ litres

So, amount of water in 48 litres of mixture $=\frac{48 x}{5+x}$ litres
According to the question,
$\frac{240}{5+x}:\left[\left\{\frac{48 x}{5+x}\right\}+12\right]=2: 1$
$\frac{240}{5+x}=\left[\left\{\frac{96 x}{5+x}\right\}+24\right]$
$240=96 x+120+24 x$
$120 x=240-120=120$
$x=\frac{120}{120}=1$
5. Two mixtures of milk and water having $48 \%$ and $84 \%$ milk concentration are mixed to get a mixture containing 60\% milk, and this mixture is poured in a vessel containing 12 litres of water. It is found that concentration of milk after the mixture is poured into the vessel is $50 \%$. Find the amount of $48 \%$ milk solution used.
A. 48 litres
B. 40 litres
C. 36 litres
D. 54 litres

Sol.


Ratio $=24: 12=2: 1$
Ratio of $48 \%$ solution and $84 \%$ solution mixed in 2: 1
Let, amount of milk and water in 60\% solution is $3 x$ and $2 x$ (litres)
According to the question,
$\frac{3 x}{2 x+12}=\frac{50}{50}$
$3 x=2 x+12 ; x=12$
So, amount of milk in the solution $=3 \mathrm{x}$ 12 = 36 litres
And, amount of water in the solution $=2$ $x 12=24$ litres
So, amount of total mixture $=36+24=$ 60 litres
Therefore, amount of $48 \%$ milk solution used $=\frac{2}{3} \times 6=40$ litres
6. Calculate the ratio in which two salt solutions of concentrations $25 \%$ and $60 \%$ are to be mixed to get a solution of concentration $30 \%$ ?
A. $6: 1$
B. $7: 2$
C. $5: 1$
D. $4: 5$

Sol. $\Rightarrow$ According to the condition given in the problem,

$\Rightarrow$ Ratio $=6: 1$
7. A can contains a mixture of two liquids $A$ and $B$ in the ratio $7: 5$. When 9 L of mixture are drawn off and the can is filled with $B$, the ratio of $A$ and $B$ becomes 7 : 9 L of liquid contained by the can initially was
A. 10
B. 20
C. 21
D. 25

Sol. Let the mixture of two liquid be $7 x$ and $5 x$.
If 9 L of mixture be drawn,
Then, liquid
$A, 7 x-9 \times \frac{7}{7+5}=7 x-\frac{63}{12}=7 x-\frac{21}{4} L$
and liquid
$B, 5 x-9 \times \frac{5}{7+5}=5 x-\frac{45}{12}=5 x-\frac{15}{4}$
When 9 L mixture is mixed in $B$, then the quantity of
$B=\left(5 x-\frac{15}{4}+9\right) \mathrm{L}$
According to the given condition,

$$
\begin{aligned}
& \frac{\left(7 x-\frac{21}{4}\right)}{\left(5 x-\frac{15}{4}+9\right)}=\frac{7}{9} \\
& \Rightarrow \quad 63 x-\frac{189}{4}=35 x-\frac{105}{4}+63 \\
& \Rightarrow \quad 63 x-35 x=\frac{-105}{4}+63+\frac{189}{4} \\
& \Rightarrow \quad 28 x=\frac{-105+252+189}{4} \\
& \Rightarrow \quad 28 x=\frac{336}{4}=84 \Rightarrow x=\frac{84}{28}=3
\end{aligned}
$$

$\therefore$ Qunatity of $A=7 x=7 \times 3=21 \mathrm{~L}$
8. In 40 L mixture of milk and water, the ratio of milk to water is 7:1.In order to make the ratio of milk and water $3: 1$, the quantity of water (in liters) that should be added to the mixture will be?
A. 6
B. $6 \frac{1}{2}$
C. $6 \frac{2}{3}$
D. $6 \frac{3}{4}$

Sol. Let the quantity of milk=7x
Quantity of water $=1 x$
$7 x+1 x=40$
$\mathrm{x}=5$
Milk=35L and water=5L
Let 'a' liter water be mixed in the solution $35 /(5+a)=3 / 1$
$35=15+3 a$
$3 \mathrm{a}=20$
$a=6 \frac{2}{3}$
9. The ratio of milk to water in a mixture is $5: 1.5 \mathrm{~L}$ of water is added to mixture and ratio becomes $5: 2$. Find the quantity of milk in the initial mixture.
A. 22 L
B. 23 L
C. 25 L
D. 27 L

Sol. Let quantity of milk and water be $5 x$ and $x$ litres.
Then, $5 x /(x+5)=5 / 2$
$\therefore 10 x=5 x+25$
$\therefore x=5$
$\therefore$ Quantity of milk $=5 x=25$ litres
10. Age of Sonam will be half of her father's age after 8 years. 8 years before the ratio of their age was $1: 3$. Find the present age of Sonam's father.
(A) 48
(B) 56
(C) 36
(D) 65
A. A
B. C
C. D
D. B

Sol. Let the age of Sonam $=x$
Then after 8 years, age of Sonam
$=x+8$
His father's age after 8 years
$=2(x+8)$
A.T.Q.
$\frac{x-16+8}{2 x+16-16}=\frac{1}{3}$
$3 x-24=2 x$
$x=24$
Present age of father
$=2 x+16-8$
$=2 x+8$
$=56$.
11.The sum of the ages of four children born at the intervals of 4 years is 48 . Find the age of the youngest child.
(A) 4 years
(B) 5 years
(C) 6 years
(D) 7 years
A. (A)
B. (C)
C. (B)
D. (D)

Sol. Let the age of youngest child is $x y r$.
According to question,
$x+x+4+x+8+x+12=48$
$4 x+24=48$
$\mathrm{x}=6$
So, age of youngest child is 6 yr .
12. The ages of two brothers are in the ratio 5:8 and the difference between their ages is 12 , find their ages. (in years)
(A) 20, 32
(B) 16,28
(C) 18,30
(D) 22,34
A. (B)
B. (D)
C. (A)
D. (C)

Sol. The ages of two brothers are $5 x$ and $8 x$.
Given that , $8 x-5 x=3 x$
And $3 x=12$
$x=4$
So, the age of brothers are 20 year and 32 year.
13. Surya is 25 years older than his son. In 5 years, he will be twice as old as his son. What will be Surya's age after 3 years?
(A) 20
(B) 23
(C) 45
(D) 48
A. (B)
B. (A)
C. (D)
D. (C)

Sol. Sons age $=s$
Surya's age $=x$
$x=25+s$
Also $x+5=2(s+5)$
$30+s=2 s+10$
$\mathrm{s}=20$
$x=45$
In 3 years surya's age will be $x+3=48$
14. The ratio of present ages of two persons is $3: 2$ and 10 years back the ratio was $2: 1$. What will be the ratio of their ages after 5 years?
A. $4: 3$
B. 7 : 5
C. $5: 2$
D. None of the above

Sol. The ratio of present ages of two persons = 3:2
10 years back the ratio was $=2: 1$
The gap in ratio is of 1 so here 10 year=1 5 year = 1/2
Ratio after 5 years $=3+1 / 2: 2+1 / 2 \Rightarrow \frac{7}{2}:$ $\frac{5}{2} \Rightarrow 7: 5$
15. The present average age of a family of four members is $36 y r$. If the total age of the family before 12 yr was 96 and the fourth member was born 12 years ago.Find the average age of the family before the birth of the youngest member?
A. 48 yr
B. 40 yr
C. 32 yr
D. 24 yr

Sol. Total age of 4 members $=4 \times 36=$ 144 years
Total age of 3 members before 12 years
$=144-4 \times 12$
$=96$ years
Reqd.average age $=\frac{96}{3}=32$
16. The average age of 30 number is 12 . The average of the first 20 of them is 11 and that of the next 9 is 10.The last number is
A. 60
B. 45
C. 40
D. 50

Sol.
Sum of 30 numbers $=30 \times 12=360$
Sum of 20 mumber $=20 \times 11=220$
Sum of next 9 mumbers $=9 \times 10=90$
last mumber $=360-(220+90)=50$
17. Ram's son's age is $1 / 3$ of Ram's wife's age. Ram's wife's age is $4 / 5$ of Ram's age and Ram's age is $3 / 5$ of Ram's father's age. Find the age of the son of Ram, if Ram's father is 50 yr old.
A. 8 yr
B. 10 yr
C. 12 yr
D. 6 yr

Sol. Ram father age is 50 year
so Ram's age $=30 y r s$
Ram's wife age $=4 / 5 \times 30=24 y r s$
Ram son's age $=1 / 3 \times 24=8 y r s$
18. A mother after 4 yr will be twice the age of her daughter after 4 years. The sum of their present ages is 46 . What is the present age of the daughter?
A. 14 yr
B. 15 yr
C. 16 yr
D. None of these

Sol. Let present age of daughter be $x$ years, then
her mother's age $=(46-x)$ years
After 4 years,
Daughter's age $=(x+4)$ years and
Mother's age $=(46-x+4)$ years $=(50$

- x)years

According to question,

$$
\begin{aligned}
& 50-x=2 \times(x+4) \\
\Rightarrow & 50-x=2 x+8 \\
\Rightarrow & 3 x=42 \\
\Rightarrow & x=\frac{42}{3}=14 \text { years }
\end{aligned}
$$

Thus, daughter's present age $=14$ years Hence, option A is correct.
19. A Man is 26 years older than his son. After 3 years, his age will be 3 times of his son. Find the present age of father.
(A) 10 year
(B) 36 year
(C) 32 year
(D) 40 year
A. (C)
B. (A)
C. (B)
D. (D)

Sol. Let the age of man and son is $x \& y$ respectively
$x-y=26$......(i)
and $x+3=3(y+3)$
$x+3=3 y+9$
$x=3 y+6$
from equation (i) and (ii)
$2 y=20$
$Y=10$
$x=36$ years
20. Ram's present age is 4 times his son's present age. 5 years hence Ram will be thrice his son's age at that time. Find their present ages. (in years)
(A) 60 and 15
(B) 40 and 10
(C) 20 and 5
(D) 32 and 8
A. (D)
B. (B)
C. (A)
D. (C)

Sol. let
The present age of Ram's son be $=x$, The present age of Ram's son be $=y$
Given $=4 x=y$ $\qquad$
Again,
$3(x+5)=y+5$
$3 x+15=y+5$
$3 x+15=4 x+5$ $\qquad$ (from eq. (i))
$x=10$
Hence, there Present ages of Ram and This son are 40 years and 10 years respectively.
21. The sum of the present ages of Varun and Kapil is 42 yr . The ratio of their ages after 5 yr will be 15:11. What is the present age of Kapil?
A. 17 yr
B. 24 yr
C. 25 yr
D. 22 yr

Sol. Let $X$ and $Y$ be the present ages of Varun and Kapil respectively.
$X+Y=42 \ldots$. (1)
After 5 years
$(X+5):(Y+5)=15: 11$
$11(X+5)=15(Y+5)$
$11 X+55=15 Y+75$
$11 X=15 Y+20$
$X=(15 Y+20) / 11$
By equation (1) and (2)
$(15 Y+20) / 11+Y=42$
$15 Y+20+11 Y=42 \times 11$
$26 Y+20=462$
$26 Y=442$
$Y=442 / 26=17$
Hence present age of Kapil $=17$ Years
22. The present ages of Ram, Shyam and Mohan are in the ratio of 6:7:9 and ratio of ages of Shyam, Mohan and Sohan is $8: 5: 3$. If the age of Sohan is 54 years then find the difference between Shyam and Mohan's age.
A. 33
B. 22
C. 24
D. 36



Let the age of Ram, Shyam, Mohan and
Sohan is $48 x, 56 x, 45 x, 27 x$ respectively. Given $27 x=54$
$x=2$
Required, difference in Shyam and
Mohan's age =
$56 x-45 x=11 x=22$ years .
23. The ratio of Asha's age 4 years ago and Aisha's age after 4 years is 1: 1. Presently, the ratio of their ages is 5: 3. Find the ratio between Asha's age 4 years hence and Aisha's age 4 years ago.
A. $1: 3$
B. $3: 1$
C. $4: 3$
D. $3: 4$

Sol. Currently, the ratio of their ages is 5:3. Suppose, their ages are: $5 x$ and $3 x$ respectively
Asha's age 4 years ago $=5 x-4$
Aisha's age after 4 years $=3 x+4$
Ratio of Asha's age 4 years ago and Aisha's age after 4 years is $1: 1$
Therefore,
$\frac{5 x-4}{3 x+4}=\frac{1}{1}$
Solving, we get $x=4$
We are required to find the ratio between
Asha's age 4 years hence and Aisha's age 4 years ago.
Asha's age: $5 x+4$
Aisha's age: $3 x-4$
Putting the value of $x$, we get:
$\frac{5 x+4}{3 x-4}=\frac{3}{1}$
So, ratio will be $3: 1$
24. Age of person 12 years ago was 4 times of his son. 12 years hence age of mother would be 3 times of son. If age of father is 9 years more than mother, then what is present age of son?
A. 60
B. 40
C. 50
D. 30

Sol. let age of son 12 years ago be $x$ and that of the father be $4 x$
12 years hence age of son $=x+24$
Age of mother 12 years hence $=(x+24) 3$
$=3 x+72$
Present age of mother $=3 x+72-12=$ $3 x+60$
Present age of father $=4 x+12$
According to question
$4 x+12=3 x+60$
$\therefore x=48$ year:s
Age of son $=48+12=60$ years
25. Ratio of present ages of $A$ and $B$ and $A$ and $C$ are $5: 7$ and $1: 2$ respectively. If at the time of the birth of $A$ the sum of ages of $B$ and $C$ was 35 years. Then find the present age of $A$.
A. 25 yr
B. 35 yr
C. 50 yr
D. 40 yr

Sol. Ratio of present ages :
$A: B=5: 7$
A:C=1:2=5:10
So ratio of ages of $A B$ and $C=$
$A: B: C=5: 7: 10$
Let the common ration $=x$
So present age of $A=5 x$
Present age of $B=7 x$
Present age of $C=10 x$
At the time of the birth of $A$,
Age of $B=7 x-5 x=2 x y r$
Age of $C=10 x-5 x=5 x y r$
Sum of ages of $B$ and $C=2 x+5 x=7 x$
According to question,
$7 x=35$
$\Rightarrow x=5$
So present age of $A=5 x=5 * 5=25$ years
26. Find the greatest number that will divide 400, 445 and 541 leaving remainder 9, 20 and 14 as remainders.
A. 18
B. 19
C. 17
D. 9

Sol. Firstly, we will have to subtract the respective remainders out of the numbers:
So, the numbers will be:
$400-9=391$
$445-20=425$
$541-14=527$
Now the required number will be the HCF of these numbers:

HCF $(391,425,527)=17$
So the number is 17
27.If 10 -digit number 67127y76x2 is divisible by 88 . then the value of $(7 x-2 y)$ is:
A. 10
B. 7
C. 3
D. 5

Sol. For divisible by 88, the given number should be divisible by 11 and 8 both.
For divisibility by 8
$6 \times 2$ should be divisible by 8
So, $x$ will be 3 .
For divisibility by 11 difference of sum of odd place digits and sum of even place digits should be zero or divisible by 11.
$=(6+1+7+7+x)-(7+2+y+6+2)$
$=(21+x)-(17+y)=4+x-y$
By putting $x=3,4+3-y=7-y$ should be zero or
Multiple of 11
So, $y=7$
So, $7 x-2 y=7 \times 3-2 \times 7=21-14=7$
28. If a 10 -digit number $1330 \times 558 y 2$ is divisible by 88 , then the value of $(x+y)$ is:
A. 6
B. 8
C. 9
D. 7

Sol. $1330 \times 558 y 2$ is divisible by 88 so it must be divisible by 11 and 8
For divisibility by 11
$X+y+9-18=0$ or multiple of 11
By taking the above expression equal to 0 we get
$x+y=9$
29. If a 9 -digit number $32 x 4115 y 2$ is divisible by 88 , then the value of $(4 x-y)$ for the smallest possible value of $y$, is:
A. 31
B. 20
C. -1
D. 11

Sol. For divisibility by 88, number should be divisible by 11 and 8 both.
For divisible by 8 last 3 digit of the number (5y2) must be divisible by 8 .
So, the value of $y$ can be 1,5 and 9 .
For divisibility by 11 , difference of sum of digits at odd place and sum of digits at even place must be zero or divisible by 11.

So, $(11+x)-(7+y)=0$ or multiple For the smallest value of $y, y=1$
$11+x-7-1=0$
$3+x=0$
so, only one value of $x$ that is $x=8$ will satisfy the equation.
By putting $y=1$ and $x=8$
$(4 x-y)=31$
30. If the number $97215^{*} 6$ is completely divisible by 11 then the digit representing * is:
A. 2
B. 3
C. 4
D. 5

Sol. The given number is $97215^{*} 6$
By the divisibility rule of 11 we get:
$(6+5+2+9)-(*+1+7)=(14-x)$
Then $14-x$ must be divisible by 11
$\therefore \mathrm{x}=3$
31. The least number, which Is to be added to the greatest number of 4 digits so that the sum may be divisible by 345 , Is
A. 50
B. 6
C. 60
D. 51

Sol. The largest 4-digit number $=9999$
345)9999(28

690

3099

2760
339
$\therefore$ Required number $=345-339=6$
32. $2^{16}-1$ is divisible by
A. 11
B. 13
C. 17
D. 19

Sol. $2^{16}-1=\left(2^{8}\right) 2-1$
$=\left(2^{8}+1\right)\left(2^{8}-1\right)$
$=(256+1) 1256-1)$
$=257 \times 255$ which is exactly di-visible by 17.
33. Find the remainder when $7^{65}$ is divided by 16808.
A. 16807
B. 6
C. $7^{13}$
D. None of these

Sol.

$$
\frac{7^{65}}{16808}=\frac{\left(7^{5}\right)^{13}}{16808}
$$

$=\frac{(16807)^{13}}{16808}=\frac{(16808-1)^{13}}{16808}=(-1)^{13}=-1$
Hence, the remainder when $7^{65}$ is divided by 16808 is equal to -1 or $16808-1=$ 16807.
34.If 738A6A is divisible by 11 , then the value of $A$ is
A. 6
B. 3
C. 9
D. 1

Sol. As 738A6 A is divisible by 11.
We have, if a number is divisible by 11 , then the difference of the sum of digits at odd places and the sum of its digits at even places, is either 0 or will divisible by 11. Therefore,

$$
\begin{aligned}
A+A+3 & =6+8+7 \\
2 A & =21-3 \\
2 A & =18 \\
A & =\frac{18}{2}=9
\end{aligned}
$$

35.1008 divided by which single digit number gives a perfect square?
A. 9
B. 4
C. 8
D. 7

Sol. Take option (4),
1008 divide by $7=1008 / 7=144$
144 is a square of 12
Now, take option (3)
1008 divide by $8=1008 / 8=126$
126 is not a square of any number.
Take option (1)
1008 divide by $9=1008 / 9=112$
112 is not a square of any number.
Take option (2),
1008 divide by $4=1008 / 4=252$
252 is not a square of any number.
Hence, the answer is 7
36.A number when divided by 280 leaves 115 as remainder. When the same number is divided by 35 , the remainder is
A. 15
B. 10
C. 20
D. 17

Sol. Here, 280 is a multiple of 35 .
$\therefore$ Required remainder
$=$ Remainder obtained on dividing 115 by $35=10$
37. What number, from the following, should be deducted from 1184 to make it exactly divisible by 21?
A. 15
B. 12
C. 8
D. 7

Sol. 1176 is exactly divisible by 21 so $(1184-1176)=8$ should be deducted from 1184.
38. You have 20 big and 16 small diaries and you want to make present with both type of diaries. How many maximum present can be made without leaving any diary?
(A) 5
(B) 4
(C) 3
(D) 2
A. (C)
B. (B)
C. (A)
D. (D)

Sol. maximum present $=\operatorname{HCF}$ of $(16,20)$ $=4$
39.What number should be deducted from 1265 to make it exactly divisible by 29?
(A) 15
(B) 16
(C) 18
(D) 17
A. (C)
B. (B)
C. (D)
D. (A)

Sol. We can write $1265=43 \times 29+18$
So make the number divisible by 29 we have to subtract 18
40. Find the smallest number which is divided by $16,24,36$ and 54 leaves, remainder 12, 20, 32 and 50 respectively.
(A) 432
(B) 444
(C) 428
(D) 452
A. (B)
B. (A)
C. (D)
D. (C)

Sol. Since the difference is constant (16-$12),(24-20),(36-32),(54-50)=4$
Required number $=\operatorname{LCM}(16,24,36,54)-$ $4=432-4=428$
41. Which is the least number which when doubled will be exactly divisible by 12 , 18, 21 and 30 ?
A. 2520
B. 1260
C. 630
D. 196

Sol. Let $2 X$ be the number exactly divisible by $12,18,21$ and 30 .
$12=2 \times 2 \times 3$
$18=2 \times 3 \times 3$
$21=3 \times 7$
$30=2 \times 3 \times 5$
L.C.M. of 12, 18, 21 and $30=$ $2 \times 2 \times 3 \times 3 \times 5 \times 7=1260$
Hence $2 X=1260$
$=>X=630$
42.Find the least number to be added to 1739 so that it is exactly divisible by 11-
(A) 11
(B) 2
(C) 1
(D) 10
A. (C)
B. (A)
C. (B)
D. (D)

Sol. Divide the given number by 11 1739/11 gives 1 as remainder , so to make the number divisible by 11 we need to add 10 to it.
43. In a number system, on dividing 11509 with a number Mukesh gets 71 as dividend and 7 as remainder. What will be the divisor?
(A) 132 (B) 172
(C) 182 (D) 162
A. (D)
B. (A)
C. (B)
D. (C)

Sol.
44. The greatest number which when divided by 989 and 1327 leaves remainder 5 and 7 respectively, is
A. 8
B. 16
C. 24
D. 32

Sol. Let $X$ be the number s . t .
$989=a X+5 \rightarrow a X=989-5=984$
$1327=b X+7 \rightarrow b X=1327-7=1320$
$984=2 \times 2 \times 2 \times 2 \times 3 \times 41$
$1320=2 \times 2 \times 2 \times 3 \times 5 \times 11$
HCF of 984 and $1320=2 \times 2 \times 2 \times 3=24$
Therefore $X=24$

The greatest number which when divided by 989 and 1327 leaves remainder 5 and 7 respectively is 24.
45.The number nearest to 10000 which is exactly divisible by each of $3,4,5,6,7$ and 8 is
A. 9240
B. 10080
C. 9996
D. 10000

Sol. First take the LCM of $3,4,5,6,7,8=840$
Dividing 10000 by 840 we get remainder $=760$
Number nearest to 10000 will be 10000$760=9240$
And $10000+(840-760)=10000+80=$ 10080
Thus there are two numbers
46. A prime number is the number which is divisible
A. 1
B. 2
C. itself
D. 1 and itself only

Sol. A prime number is a positive integer that has exactly two distinct whole number factors (or divisors), namely 1 and the number itself.
47. Find the least number to be added to 1739 so that it is exactly divisible by 11 .
A. 11
B. 2
C. 1
D. 10

Sol. On dividing 1739 by eleven, we get the remainder $=1$
so on adding 10 we get the number exactly divisible by 11 i.e. 1749
Alternate Method:
For exactly divisible by $11=(1+3)-(7+9)$ should be equal to 0 or divisible by 11 .
By going through the options, if we add 10 to $1739=1739+10=1749$
So, $(7+9)-(1+4)=11$

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