26. Find the value of/का मान ज्ञात करें? 17942535 ÷ 45

(a) 398723 (b) 358743 (c) 628724 (d) 228773

Soln. $\frac{1443968}{45} = \frac{1993615 \times 2}{5 \times 2} = \frac{7 \times 2}{1} = 5$

So, option (c) satisfy our condition

Ans → 398723.

In any equation

digital sumof L.H.S = digital sum of R.H.S

Disclaimer:

1. **Digital sum of both sides of equation must be equal. But if digital sum of both side is equal, it doesn't mean that equation is correct.**
   समीकरण के दोनों पक्षों का डिजिटल योग बराबर होना चाहिए। लेकिन यदि दोनों पक्षों का डिजिटल योग बराबर है, तो इसका मतलब यह नहीं है कि समीकरण सही है।
2. **Digital sum is not valid for approximation.**
   डिजिटल योग सन्निकटन के लिए मान्य नहीं है।

27.

$\Rightarrow \quad 0 + 0 = 27 = 8199$

$= 0$

value satisfied both sides are equal.

28. **45723 – 36432 = 9291**

Soln. $45723 - 36432 = 9291$

$\Rightarrow \quad 3 - 0 = 3$

both sides are equal

LHS = RHS.

29. $26^2 + 972 = ?$

(a) $27^2 + 93^2$ (b) $34^2 + 93^2$ (c) $79^2 + 62^2$ (d) $82^2 + 41^2$

Soln: $26^2 + 97^2$

$= 8^2 + 7^2$

$= 49 + 64 \rightarrow 4 + 1 = 5$

So, option (c) satisfy our condition

Ans. $\rightarrow 79^2 + 62^2$

30. 185 × 262 = 48470 × x, find the value of x?

Soln: $185 \times 262 = 48470$

$5 \times 1 = 5$

$5 = 5$

$\Rightarrow$ 1 Ans.

31. Find the value of x/x का मान ज्ञात करें?

24628 + 2567 – 3525 = x + 457 – 5580

(a) 28673 (b) 28693 (c) 24836 (d) 28793

Soln: $24628 + 2567 - 3525 = x + 457 - 5580$

$\Rightarrow 4 + 2 - 6 = x + 7 - 0$

$0/9 = x + 7$

$x = 9 - 7$

$\boxed{x = 2}$

So, option (d) gives digital sum 2

Ans = 28793

32. Find the value of x if/x का मान ज्ञात करें यदि

400 + 498 + 689 = x + 739

(a) 838 (b) 948 (c) 848 (d) 858

Sol^{n}: $400 + 498 + 689 = x + 739$

$4 + 3 + 5 = x + 1$

$3 = x + 1$

$\boxed{x = 2}$

So, option (c) gives digital sum 2

Ans → 848

33. Find the value of x if/x का मान ज्ञात करें यदि

1125 – 3089 – 2112 + 6142 = x

(a) 2146 (b) 2136 (c) 2176 (d) 2066

Sol^{n}: $9/o - 2 - 6 + 4 = x$

$\boxed{5 = x}$

So, option (d) gives D.S = 5

Ans. = 2066

34. Find the value of / का मान ज्ञात करें

$(1004)^2 – (998)^2$

(a) 11012 (b) 12012 (c) 220012 (d) 2212

Sol^{n}: $(1004)^2 - (998)^2$

$5^2 - 8^2$

$25 - 64$

$7 - 1 = 6$ D.S.

So, option (b) gives D.S → 6

Ans. = 12012

35. Find the value of / का मान ज्ञात करें

$(203 + 107)^2 – (203 – 107)^2$

(a) 85886 (b) 86884 (c) 43442 (d) 87854

Soln $(203 + 107)^2 - (203 - 107)^2$

$(5+8)^2 - (9+5-8)^2$

$7 - 0 = 7$ D.S.

So, option (b) gives D.S. → 7

Ans. → 86884

36. Find the value of /का मान ज्ञात करें

$113^2 + 115^2 + 117^2 - 113 \times 115 - 115 \times 117 - 117 \times 113 = ?$

(a) 0 (b) 4 (c) 8 (d) 12

Soln $113^2 + 115^2 + 117^2 - 113 \times 115 - 115 \times 117 - 117 \times 113$

$= 7 + 4 + 0 - 5 \times 7 - 7 \times 0 - 0 \times 5$

$= 7 + 4 - 8 - 0 - 0 \Rightarrow$ D.S. = 3

Ans = 12

37. 478932 + 54321 + 2221 + 443 + 55 + 8 = ?

(a) 543214 (b) 234567 (c) 535980 (d) 630808

Soln. $478932 + 54321 + 2221 + 443 + 55 + 8$

$\Rightarrow 6 + 6 + 7 + 2 + 1 + 8 = 12 = 3$ D.S.

option (c) gives D.S – 3

Ans. → 535980

38. $4321^2 + 2224^2 + 543^2 + 248^2 = ?$

(a) 23973570 (b) 93273560 (c) 39273550 (d) 75372380

Soln. $1^2 + 1^2 + 3^2 + 5^2$

$\Rightarrow 1 + 1 + 0 + 7 = 9/0$

option (a) gives D.S → 0

Ans → 23973570

39. $\sqrt{1+90\times91\times92\times93}$ = ?

(a) 8371 (b) 8721 (c) 8141 (d) 8231

Soln. $1+0\times1\times2\times3 = A^2$

$1\ DS = A^2$

option (a) gives digital sum → 1

⇒ $8371^2 \rightarrow 1^2 = 1$

40. $\sqrt{1+6\times7\times8\times9}$ = ?

(a) 40 (b) 55 (c) 56 (d) 52

Soln. $1+6\times7\times8\times9 = A^2$

$1+0 = 1$ D.S

option (b) gives D.S → 1

⇒ $55^2 \rightarrow 1^2 \rightarrow 1$ satisfy condition.

41. Find the square root of given value - 1 + 25 × 26 × 27 × 28

(a) 701 (b) 702 (c) 706 (d) 704

Soln. $1+0 = A^2$

D.S = 1

So, option (a) gives D.S = 1

Ans = 701

42. $17 \times 11 - 70 = ?$

(a) 1139 (b) 1189 (c) 1239 (d) 117

Soln. $8 \times 2 - 7$

$7 - 7 = 0$ D.S

$\Rightarrow$ option (d) gives D.S $\rightarrow 0$

Ans. = 117

43. $338 \times 97 - 1835 = ?$

(a) 30951 (b) 31951 (c) 29951 (d) 32951

Soln. $5 \times 7 - 8$

$8 - 8 = 0$

option (a) gives D.S = 0

Ans = 30951

44. Is equal to/के बराबर है?

$(0.5 \times 5 + 0.25 \times 0.5 + 0.5 \times 4 + 0.5 \times 0.75)$

(a) 5 (b) 10 (c) 15 (d) 20

Soln. $5 \times 5 + 7 \times 5 + 5 \times 4 + 5 \times 3$

$7 + 8 + 2 + 6$

5 digital sum

So, option (a) Ans.

45. What is the value of?/का मान क्या है?

$1006^2 - 1007 \times 1005 + 1008 \times 1004 - 1009 \times 1003$

(a) 6 (b) 8 (c) 27 (d) 23

Soln $1006^2 - 1007 \times 1005 + 1008 \times 1004 - 1009 \times 1003$

$\Rightarrow 7^2 - 8 \times 6 + 0 \times 5 - 1 \times 4$

$\Rightarrow 4 - 8 \times 6 - 1 \times 4$

$\Rightarrow 4 - 3 - 4 \Rightarrow 9 - 3 = 6$ digital sum

So, option (a) gives d.s. $\rightarrow 6$ Ans. $\Rightarrow 6$

46. Is equal to/के बराबर है।

$55^3 + 17^3 - 72^3 + 201960$

(a) 11 (b) 0 (c) 1 (d) 17

Soln. $1^3 + 8^3 - 0^3 + 0$

$\Rightarrow 1 + 8 = 0$ D.S.

Ans = 0

47. Is equal to/के बराबर है। $\sqrt[3]{(333)^3 + (333)^3 + (334)^3 - 3 \times 333 \times 333 \times 334}$

(a) 12 (b) 11 (c) 10 (d) 15

Soln. $0^3 + 0^3 + 1^3 - 0$

D.S $\rightarrow 1$

So, option (c) give d.s. by cubing.

Ans = 10

$48\% = \frac{48}{100} = \frac{3}{1}$ D.S. = 3

⇒ Digital sum निकालते समय Percentage व Decimal को ignore कर सकते हैं।

48. If 375375 ÷ 455 + 13.3% of 8600 - 15.7% of 9240 = 40% of x. find x = ?/यदि 375375 ÷ 455 + 8600 का 13.3% -9240 का 15.7% = x का 40% तो x = ?

(a) 1116.3 (b) 1295.3 (c) 1026.4 (d) 1305.3

Soln: 375374 ÷ 455 + 13.3% of 8600 − 15.7% of 9240

7 × 5 4 × 6

6 + 8 − 6

⇒ 6 + 8 − 6 = 40% of x

⇒ 8 = 4 × x

$x = 2$

So, option (b) gives D.S → 2

Ans = 1259.3

49. If 30% of 400 + x% of 70 = 25 % of 536, find x ?

(a) 20 (b) 30 (c) 10 (d) 40

Soln: 30% of 400 + x% of 70 = 25% of 536

3 × 4 + x × 7

⇒ 3 + x × 7 = 7 × 5

⇒ x × 7 = 8 − 3

x × 7 = 5

So, option (a) gives D.S. = 5

⇒ 20 × 7 = 14 = 5 D.S. Ans = 20.

50. **88% of 370 + 24% of 210 - ? = 118**

(a) 256 **(b) 258** **(c) 268** **(d) 358**

Soln: 88% of 370 + 24% of 210 − ? = 118

$\Rightarrow 7 \times 1 + 6 \times 3 - x = 1$

$\Rightarrow 7 + 0 - x = 1$

$\Rightarrow \boxed{x = 6}$

So, option (b) gives D.S. → 6

Ans = 258

52. **85793 - ? + 151 = 77477**

(a) 8467 **(b) 8476** **(c) 8674** **(d) 8767**

(e) N.O.T

Soln. $5 - x + 7 = 5$

$\boxed{x = 7}$

So, option (a) gives D.S. → 7

Ans → 8467

53. **5016 × 1001 - 33 × 77 + 22 = ? × 11**

(a) 435570 **(b) 456227** **(c) 572240** **(d) 366520**

Soln. $3 \times 2 - 6 \times 5 - 4 = x \times 2$

$\Rightarrow 6 - 3 - 4 = x \times 2$

$\Rightarrow \boxed{7 = x \times 2}$

So, option (b) gives D.S. → 7

$\Rightarrow 456227 \times 2 = 7$

$\Rightarrow 8 \times 2 = 7$

$7 = 7$ Ans ⇒ 456227

54. $17.3^2 + 47\%$ of $1248 = ? + 24 \times 4.156$

(a) 786.106 (b) 786.105 (c) 786.206 (d) 786.306

Soln $17.3^2 + 47\%$ of $1248 = x + 24 \times 4.156$

$2^2 + 2 \times 6 = x + 6 \times 7$

$\Rightarrow 4 + 3 = x + 6$

$\boxed{x = 1}$

So, option (a) gives D.S. $\rightarrow$ 1

Ans. = 786.106

55. If $N = 12345^2 + 12345 + 12346$ then what is the value of $\sqrt{N}$

यदि $N = 12345^2 + 12345 + 12346$ तो $\sqrt{N}$ का मान क्या है?

(a) 12346 (b) 12345 (c) 12344 (d) 12347

Soln. $N = 12345^2 + 12345 + 12346$

$6^2 + 6 + 7$

$\Rightarrow 0 + 4 = 4$ D.S.

So, option (a) gives D.S. $\rightarrow$ 4 by squaring

Ans. $\rightarrow 12346^2 \rightarrow 7^2 \Rightarrow 49 \Rightarrow 4$ D.S.

56. If $M = 0.1 + 0.1^2 + 0.01^2$ and $N = 0.3 + 0.03^2 + 0.003^2$ then what is the value of M + N ?/यदि $M = 0.1 + 0.1^2 + 0.01^2$ तो $N = 0.3 + 0.03^2 + 0.003^2$ तो M + N का मान क्या है

(a) 0.411009 (b) 0.413131 (c) 0.313131 (d) 0.131313

Soln. $M + N = 3 + 3$

$= 6$ D.S.

So, option (a) gives D.S. $\rightarrow$ 6

$\Rightarrow 0.411009$ Ans.

57. If $A = 0.1 + 0.1^2 + 0.01^2 + 0.001^2$ $B = 0.5 + 0.05^2 + 0.005^2$, $A + B = ?$

(a) 0.761626 (b) 0.862626 (c) 0.612626 (d) 0.821626

Soln. $A + B = (4) + (5 + 7 + 7)$

$\Rightarrow$ 7 D.S.

So, option (d) gives D.S. = 7

Ans $\Rightarrow$ 0.821626

58. What is the value of/का मान क्या है? $\frac{1}{0.2} + \frac{1}{0.02} + \frac{1}{0.002}$ .....upto 9 terms

(a) 222222222 (b) 111111111 (c) 555555555 (d) 525252525

Soln. I^{st} term $= \frac{1 \times 5}{2 \times 5} = \frac{5}{1}$

9 terms $= 5 \times 9$

$= 45 = 0$ D.S.

By digital sum $\rightarrow$ one of option (a, b, c) could be our answer.

59. If $x = \frac{1}{37} + \frac{1}{3.7} + \frac{1}{0.37}$ ..... upto 9 terms find x \यदि $x = \frac{1}{37} + \frac{1}{3.7} + \frac{1}{0.37}$ .....9 पदों तक x = ?

(a) 4004003 (b) 3003303 (c) 3003003 (d) 3009003

Soln. $\frac{1}{37} = \frac{1}{1}$ D.S.

9 term = $1 \times 9 = 0$ D.S.

So, option (c) gives D.S. $\rightarrow$ 0

Ans. $\rightarrow$ 3003003