लक्ष्य करिअर अॅकॅडमी

For

MPSC

(राज्यसेवा व **PSI, STI, ASO***)*

Mathematics

* संपादक *

लक्ष्य करिअर अॅकॅडमी

Mathematics

प्रकाशक

लक्ष्य करिअर अकॅडमी

For MPSC *(राज्यसेवा व* **PSI, STI, ASO)**

पत्ता : श्रीनाथ अपार्टमेंट, मुरकुटे लायब्ररी समोर, लेन नं.३, पंडीत कॉलनी, नाशिक-२

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लक्ष्य करीयर अॅकॅडमी
MPSC / UPSC मो.7887878001/ 7887878002 PSI / STI / ASO

Mathematics

श्रीनाथ अपार्टमेंट, मुरकुटे लायब्ररी समोर, लेन नं.३, पंडीत कॉलनी, नाशिक-४०० ००२.

आजच्या अत्युच्च स्पर्धेच्या युगात वाढती बेरोजगारी,खाजगी नोकरीतील अस्थिरता यामुळे सरकारी नोकरीकडे तरुणांचा वाढता कल,यातुनच समाजाविषयी आत्मीयता बाळगणारे, वास्तवाचे भान ठेवणारे, स्वच्छ चारित्र्याचे सक्षम अधिकारी निर्माण करण्यासाठी उभारलेली शैक्षणिक चळवळ म्हणजेच **"लक्ष्य करिअर अकॅडमी"**

परिक्षेचे स्वरुप

राज्यसेवा परीक्षा

पूर्व परीक्षा
- पेपर-1 सामान्य अध्ययन, एकूण प्रश्न 100, एकूण गुण 200
- पेपर-2 CSAT, एकूण प्रश्न 80, एकूण गुण 200

मुख्य परीक्षा
- Qualifying Papers → 1. English, 2.Indian Language — 2 x 300 = 600 Marks
- Essay → Two Essay — 250 Marks
- General Studies → 1. Paper I, 2. Paper II, 3.Paper III, 4.Paper IV — 4 x 250 = 1000 Marks
- Optional Subject → 1.Paper I, 2.Paper II — 2 x 300 = 500 Marks

मुलाखत

Papers to be counted for merit = 1750 + 275 = 2025 Marks

अराजपत्रित गट ब पदे (PSI / STI / ASO)

पूर्व परीक्षा
- पेपर-1 सामान्य अध्ययन, एकूण प्रश्न 100, एकूण गुण 100

मुख्य परीक्षा
- पेपर-1 मराठी, इंग्रजी व सामान्य ज्ञान, एकूण प्रश्न 100, एकूण गुण 200
- पेपर-2 सामान्य क्षमता चाचणी व पदाच्या कर्तव्यासाठी आवश्यक ज्ञान, एकूण प्रश्न 100, एकूण गुण 200

मुलाखत
- फक्त PSI पदासाठी शारिरीक चाचणी व मुलाखत

बॅच	सुरु होण्याचा दिनांक	कालावधी
१) राज्यसेवा (Foundation)	१० जून	१ वर्ष
२) PSI / STI / ASO (Foundation)	१५ जून	१ वर्ष
३) राज्यसेवा (Foundation English medium)	१५ जून	१ वर्ष
४) राज्यसेवा (Fast track)	१० डिसेंबर	५ महिने
५) PSI / STI / ASO (Fast track)	१५ डिसेंबर	५ महिने
६) राज्यसेवा (Foundation English medium)	१५ डिसेंबर	५ महिने

5. H.C.F And L.C.M

1) What is H.C.F and L.C.M of 12, 18 and 20?

Answer Options :

(1) H.C.F 2, L.C.M 180 (2) H.C.F 4, L.C.M 150

(3) H.C.F 3, L.C.M 160 (4) H.C.F 5, L.C.M 170

---

2) What is H.C.F and L.C.M of 16, 32, 36, 48, 56?

Answer Options :

(1) H.C.F 6, L.C.M 2015 (2) H.C.F 4, L.C.M 2016

(3) H.C.F 5, L.C.M 2014 (4) H.C.F 5, L.C.M 2012

---

3) What is H.C.F and L.C.M of 16, 24, 36, 54?

Answer Options :

(1) H.C.F 2, L.C.M 432 (2) H.C.F 5, L.C.M 436

(3) H.C.F 4, L.C.M 430 (4) H.C.F 6, L.C.M 435

---

4) What is H.C.F and L.C.M of 23 and 83?

Answer Options :

(1) H.C.F 3, L.C.M 1907 (2) H.C.F 1, L.C.M 1909

(3) H.C.F 4, L.C.M 1908 (4) H.C.F 6, L.C.M 1906

---

5) What is the H.C.F of 1365, 1560 and 1755?

Answer Options :

(1) 195 H.C.F (2) 194 H.C.F (3) 193 H.C.F (4) 192 H.C.F

---

6) What is H.C.F and L.C.M of 63 and 105?

Answer Options :

(1) H.C.F 21, L.C.M 315 (2) H.C.F 22, L.C.M 313

(3) H.C.F 24, L.C.M 314 (4) H.C.F 26, L.C.M 312

---

7) What is H.C.F of 336, 252 and 322?

Answer Options :

(1) 13 H.C.F (2) 14 H.C.F (3) 15 H.C.F (4) 16 H.C.F

---

8) What is H.C.F of 48, 60 72?

Answer Options :

(1) 12 H.C.F (2) 13 H.C.F (3) 14 H.C.F (4) 15 H.C.F

---

9) What is H.C.F and L.C.M of 72, 108 and 144?

Answer Options :

(1) H.C.F 36, L.C.M 432 (2) H.C.F 32, L.C.M 434

(3) H.C.F 34, L.C.M 430 (4) H.C.F 36, L.C.M 435

---

10) What is the L.C.M of 15, 20, 25, 45?

Answer Options :

(1) L.C.M 800 (2) L.C.M 900 (3) L.C.M 700 (4) L.C.M 600

---

11) 12 and 13 are prime numbers then their H.C.F is how many times their L.C.M.

Answer Options :

(1) $\frac{1}{156}$ (2) $\frac{1}{155}$ (3) $\frac{1}{154}$ (4) $\frac{1}{153}$

---

12) 25 and 26 are prime numbers then how many times their H.C.F is L.C.M.

Answer Options :

(1) $\frac{1}{630}$ (2) $\frac{1}{640}$ (3) $\frac{1}{650}$ (4) $\frac{1}{620}$

---

13) 10 and 11 are prime numbers then how many times their L.C.M is of H.C.F.

Answer Options :

(1) 108 (2) 109 (3) 111 (4) 110

---

14) $\frac{22}{15}, \frac{32}{21}, \frac{7}{30}$ what is L.C.M and H.C.F ?

Answer Options :

(1) $\frac{1}{210}$ H.C.F , $\frac{2464}{3}$ L.C.M (2) $\frac{1}{220}$ H.C.F , $\frac{2463}{3}$ L.C.M

(3) $\frac{1}{230}$ H.C.F , $\frac{2462}{3}$ L.C.M (4) $\frac{1}{240}$ H.C.F , $\frac{2461}{3}$ L.C.M

15) What is H.C.F, L.C.M of $\frac{35}{125}, \frac{42}{25}, \frac{63}{55}$?

Answer Options :

(1) $\frac{7}{1375}$ H.C.F , $\frac{630}{5}$ L.C.M

(2) $\frac{7}{1374}$ H.C.F , $\frac{620}{5}$ L.C.M

(3) $\frac{7}{1372}$ H.C.F , $\frac{610}{5}$ L.C.M

(4) $\frac{7}{1370}$ H.C.F , $\frac{600}{5}$ L.C.M

---

16) What is H.C.F of $4\frac{1}{2}, 3\frac{3}{4}, 7\frac{1}{2}$?

Answer Options :

(1) $\frac{3}{2}$ H.C.F (2) $\frac{3}{4}$ H.C.F (3) $\frac{3}{5}$ H.C.F (4) $\frac{3}{3}$ H.C.F

---

17) What is H.C.F ,L.C.M of $\frac{10}{7}, \frac{55}{28}, \frac{90}{63}$?

Answer Options :

(1) $\frac{5}{250}$ H.C.F , $\frac{950}{7}$ L.C.M

(2) $\frac{5}{251}$ H.C.F , $\frac{980}{7}$ L.C.M

(3) $\frac{5}{253}$ H.C.F , $\frac{960}{7}$ L.C.M

(4) $\frac{5}{252}$ H.C.F , $\frac{990}{7}$ L.C.M

---

18) How much is H.C.F, L.C.M of $\frac{5}{12}, \frac{25}{36}, \frac{125}{40}$?

Answer Options :

(1) $\frac{5}{360}$ H.C.F, $\frac{125}{4}$ L.C.M

(2) $\frac{5}{340}$ H.C.F, $\frac{130}{4}$ L.C.M

(3) $\frac{5}{350}$ H.C.F, $\frac{120}{4}$ L.C.M

(4) $\frac{5}{330}$ H.C.F, $\frac{125}{4}$ L.C.M

---

19) What is H.C.F and L.C.M of $6\frac{1}{2}, 10\frac{3}{4}$?

Answer Options :

(1) $\frac{1}{4}$ H.C.F , $\frac{559}{2}$ L.C.M

(2) $\frac{1}{5}$ H.C.F , $\frac{555}{2}$ L.C.M

(3) $\frac{1}{3}$ H.C.F , $\frac{558}{2}$ L.C.M

(4) $\frac{1}{6}$ H.C.F , $\frac{556}{2}$ L.C.M

20) What is H.C.F, L.C.M of $\frac{42}{25}, \frac{54}{50}$?

Answer Options :

(1) $\frac{6}{60}$ H.C.F, $\frac{377}{25}$ L.C.M

(2) $\frac{6}{40}$ H.C.F , $\frac{376}{25}$ L.C.M

(3) $\frac{6}{30}$ H.C.F , $\frac{375}{25}$ L.C.M

(4) $\frac{6}{50}$ H.C.F , $\frac{378}{25}$ L.C.M

---

21) What is H.C.F and L.C.M of $5\frac{1}{2}, 4\frac{3}{5}$?

Answer Options :

(1) $\frac{1}{10}$ H.C.F, $\frac{253}{1}$ L.C.M

(2) $\frac{1}{20}$ H.C.F , $\frac{254}{1}$ L.C.M

(3) $\frac{1}{30}$ H.C.F , $\frac{355}{1}$ L.C.M

(4) $\frac{1}{40}$ H.C.F , $\frac{256}{1}$ L.C.M

---

22) How much is H.C.F, L.C.M of $\frac{2}{3}, \frac{8}{9}, \frac{16}{81}, \frac{10}{27}$?

Answer Options :

(1) $\frac{2}{81}$ H.C.F , $\frac{80}{3}$ L.C.M

(2) $\frac{2}{84}$ H.C.F, $\frac{60}{3}$ L.C.M

(3) $\frac{2}{82}$ H.C.F , $\frac{70}{3}$ L.C.M

(4) $\frac{2}{85}$ H.C.F , $\frac{50}{3}$ L.C.M

---

23) Find the L.C.M of H.C.F of 22.5, 0.75 and 15.

Answer Options :

(1) H.C.F 0.74, L.C.M 44.00

(2) H.C.F 0.75, L.C.M 45.00

(3) H.C.F 0.73, L.C.M 43.00

(4) H.C.F 0.76, L.C.M 42.00

---

24) Find H.C.F, L.C.M of 1.7, 0.51, 0.153.

Answer Options :

(1) H.C.F 0.016, L.C.M 15. 200

(2) H.C.F 0.014, L.C.M 15.100

(3) H.C.F 0.015, L.C.M 15.400

(4) H.C.F 0.017, L.C.M 15.300

25) Find the L.C.M of 0.12, 3.6 and 1.08.

Answer Options :

(1) 10.40 L.C.M (2) 10.60 L.C.M (3) 10.80 L.C.M (4) 10.50 L.C.M

---

26) Find the L.C.M of 0.017, 0.119 and 0.136.

Answer Options :

(1) 0.952 L.C.M (2) 0.950 L.C.M (3) 0.951 L.C.M (4) 0.953 L.C.M

---

27) Find H.C.F and L.C.M of 0.05, 0.250, 0.65.

Answer Options :

(1) H.C.F 0.060, L.C.M 3.24 (2) H.C.F 0.050, L.C.M 3.25

(3) H.C.F 0.020, L.C.M 3.20 (4) H.C.F 0.040, L.C.M 3.22

---

28) What is H.C.F and L.C.M of 2.1, 2.43, 0.18?

Answer Options :

(1) H.C.F 0.03, L.C.M 170.10 (2) H.C.F 0.05, L.C.M 150.10

(3) H.C.F 0.02, L.C.M 160.10 (4) H.C.F 0.04, L.C.M 180.10

---

29) What is H.C.F and L.C.M of 9.9, 0.18, 27 ?

Answer Options :

(1) H.C.F0.17, L.C.M 295 (2) H.C.F0.18, L.C.M 297

(3) H.C.F0.16, L.C.M 294 (4) H.C.F0.15, L.C.M 296

---

30) What is H.C.F and L.C.M of 0.6, 9.6, 0.36 ?

Answer Options :

(1) H.C.F 0.14, L.C.M 27.8 (2) H.C.F 0.13, L.C.M 29.8

(3) H.C.F 0.12, L.C.M 28.8 (4) H.C.F 0.15, L.C.M 26.8

---

31) What is H.C.F and L.C.M of 0.63, 1.05, 2.1 ?

Answer Options :

(1) H.C.F 0.21, L.C.M 6.30 (2) H.C.F 0.23, L.C.M 6.10

(3) H.C.F 0.24, L.C.M 6.20 (4) H.C.F 0.25. L.C.M 6.40

---

32) The product of two numbers is 2160. If H.C.F is 12 what is L.C.M ?

Answer Options :

(1) 140 L.C.M (2) 150 L.C.M (3) 160 L.C.M (4) 180 L.C.M

33) If product of two numbers is 588 and H.C.F is 7, what is L.C.M?

Answer Options :

(1) 83 L.C.M (2) 84 L.C.M (3) 85 L.C.M (4) 86 L.C.M

34) If product of two numbers is 2700 and H.C.F is 180, what is H.C.F?

Answer Options :

(1) 13 H.C.F (2) 14 H.C.F (3) 15 H.C.F (4) 16 H.C.F

35) L.C.M of two numbers is 255 and H.C.F is 1. If the 1st number is 17, what is the second number?

Answer Options :

(1) 17 (2) 14 (3) 15 (4) 16

36) L.C.M of two numbers is 693 and H.C.F is 11. If the 1st number is 77, then what is the second number?

Answer Options :

(1) 99 (2) 97 (3) 96 (4) 98

37) Two numbers 4 x and 6 x have H.C.F 16 and L.C.M 96 if x =?

Answer Options :

(1) 6 (2) 7 (3) 8 (4) 9

38) If 1st number is 3x and 2nd is 5x and their H.C.F is 7 and L.C.M is 105, find both the numbers.

Answer Options :

(1) 21 and 35 (2) 22 and 34 (3) 23 and 36 (4) 24 and 37

39) Two numbers 6x and 8x have H.C.F 14 and L.C.M 168 if x = ?

Answer Options :

(1) 8 (2) 7 (3) 6 (4) 5

40) Two numbers 7x and 9x have H.C.F 6 and L.C.M 378 then which are the numbers?

Answer Options :

(1) 43, 55 (2) 44, 52 (3) 40, 53 (4) 42, 54

41) If L.C.M is 510 and H.C.F is 34, state the smaller number.

Answer Options :

(1) 102 (2) 103 (3) 104 (4) 100

---

42) L.C.M and H.C.F of two numbers are 48 and 4 respectively. So tell the smallest number out of them.

Answer Options :

(1) 13 (2) 11 (3) 12 (4) 14

---

43) L.C.M of two numbers is 2448 and H.C.F is 68 Find the smaller and larger numbers.

Answer Options :

(1) Small = 272 , Large = 612 (2) Small = 270, Large = 611

(3) Small = 270, Large = 610 (4) Small = 271, Large = 613

---

44) L.C.M of two numbers is 495 and H.C.F is 5 Find the smaller and larger numbers.

Answer Options :

(1) Small = 46, Large = 56 (2) Small = 45, Large = 55

(3) Small = 47, Large = 58 (4) Small = 44, Large = 57

---

45) L.C.M of two numbers is 108 and H.C.F is 18. Find the smaller and larger numbers.

Answer Options :

(1) Small = 32, Large = 52 (2) Small = 33, Large = 55

(3) Small = 36 Large = 54 (4) Small = 34 Large = 53

Answer Key

Q	A	Q	A	Q	A	Q	A	Q	A
1	**1**	11	**1**	21	**1**	31	**1**	41	**1**
2	**2**	12	**3**	22	**1**	32	**4**	42	**3**
3	**1**	13	**4**	23	**2**	33	**2**	43	**1**
4	**2**	14	**1**	24	**4**	34	**3**	44	**2**
5	**1**	15	**1**	25	**3**	35	**3**	45	**3**
6	**1**	16	**2**	26	**1**	36	**1**		
7	**2**	17	**4**	27	**2**	37	**3**		
8	**1**	18	**1**	28	**1**	38	**1**		
9	**1**	19	**1**	29	**2**	39	**2**		
10	**2**	20	**4**	30	**3**	40	**4**		

17. Boats And Streams

1) The speed of a swimmer is 10 km/h downstream and 6 km/h against the flow. Find the speed of the flow and the speed of the swimmer in still water.

Answer Options :

(1) 8 km/hr (2) 7 km/hr (3) 9 km/hr (4) 6 km/hr

---

2) A sailor goes 15 km upstream and 25 km downstream. It takes 5 hours each time. Find the speed of the flow and the speed of the sailor in still water.

Answer Options :

(1) 7 km/hr (2) 5 km/hr (3) 4 km/hr (4) 6 km/hr

---

3) A sailor has a speed of 6 km/h in still water and in a flow of 2 km/h. It takes a total of 1 hour 30 minutes for a boatman to travel from A to B and back to A in a river.

Answer Options :

(1) 13 km. (2) 12 km. (3) 14 km. (4) 11 km.

---

4) A boat is moving at a speed of 13 km/h in calm water and the speed of the flow is 4 km/h. How much time will it take her to travel 68 km downstream?

Answer Options :

(1) 4 hours (2) 5 hours (3) 6 hours (4) 3 hours

---

5) A boat covers a distance of 30 km downstream in 2 hours 30 minutes and takes 3 hours 456 minutes to cover the same distance upstream. Find the velocity of the flow.

Answer Options :

(1) 3 km/hr (2) 4 km/hr (3) 5 km/hr (4) 2 km/hr

---

6) The velocity of flow in a river is 2 km/hr. In this a motor boat travels 6 km upstream and returns to the starting point in 33 minutes. What is the speed of a motor boat in still water?

Answer Options :

(1) 20 km/hr (2) 22 km/hr (3) 23 km/hr (4) 24 km/hr

7) A boat covers a distance of 24 km downstream in 4 hours and takes 6 hours to cover the same distance upstream. What is the speed of the boat in still water?

Answer Options :

(1) 3.5 km/hr (2) 5.5 km/hr

(3) 6 km/hr (4) None of these.

---

8) A boat covers a distance of 8 km downstream in 1 hour and takes 1 hour to cover a distance of 2 km against the flow. What is the velocity of the flow?

Answer Options :

(1) 2 km/hr (2) 3 km/hr (3) 4 km/hr (4) 5 km/hr

---

9) A sailor sails 1 km downstream in 5 minutes and 6 km against the flow in 1 hour. What is the velocity of the flow?

Answer Options :

(1) 6 km/hr (2) 10 km/hr (3) 3 km/hr (4) 12 km/hr

---

10) A boat covers a distance of 12 km in 48 minutes against the flow. If the speed of the flow is 2 km/h, what will be the speed of the boat in still water?

Answer Options :

(1) 17 km/hr (2) 15 km/hr (3) 13 km/hr (4) 2.25 km/hr

---

11) A motor boat takes 2 hours to cover a distance of 9 km downstream and 6 hours to cover the same distance upstream. What is the speed of the boat in still water?

Answer Options :

(1) 3 km/hr (2) 2 km/hr (3) 1.5 km/hr (4) 1 km/hr

---

12) One man can pull three-quarters of a boat against the flow in 15 minutes and another takes 10 minutes to return, what is the ratio velocity to the flow in still water?

Answer Options :

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

---

13) A motor boat moves at a speed of 36 km/hr in still water. It travels 56 km upstream in 1 hour 45 minutes. How much time will it take her to cover the same distance in favor of the flow?

Answer Options :

(1) 2 hours 25 minutes (2) 3 hours

(3) 1 hour 24 minutes (4) 2 hours 55 minutes

---

14) A motor boat moves at a speed of 45 km/hr in still water. If she takes 1 hour 20 minutes to travel 80 km downstream, how much time will it take her to cover the same distance upstream?

Answer Options :

(1) 3 hours (2) 1 hour 20 minutes

(3) 2 hours 40 minutes (4) 2 hours 55 minutes

---

15) The speed of a stream is 4 km/h. A boat travels 6 km upstream and returns to its original position in 2 hours. How much time did the boat take to go upstream?

Answer Options :

(1) 1 hours (2) $1\frac{1}{5}$ hours

(3) $1\frac{1}{4}$ hours (4) $1\frac{1}{2}$ hours

---

16) The flow of a river is 2 km/h. It takes twice as much time for a person to swim against the flow of a river as it does to swim downstream. What is the speed of a person in still water?

Answer Options :

(1) 6 km/hr (2) 4 km/hr (3) 10 km/hr (4) 8 km/hr

---

17) A boat traveling downstream covers a distance of 30 km in 2 hours, but the boat takes 6 hours to cover the same distance while returning. If the speed of the stream is half the speed of the boat, what is the speed of the boat?

Answer Options :

(1) 15 km/hr (2) 5 km/hr

(3) 10 km/hr (4) None of these.

---

18) A person covers a distance of 1 km in 10 minutes in the downstream direction and 30 minutes in the upstream direction. What is the velocity of the flow?

Answer Options :

(1) 1 km/hr (2) 2 km/hr (3) 4 km/hr (4) 3 km/hr

---

19) A boat covers a distance of 20 km downstream in 2 hours and upstream covers the same distance in 5 hours. What is the speed of the boat in still water?

Answer Options :

(1) 2 km/hr (2) 3 km/hr (3) 4 km/hr (4) 5 km/hr

---

20) A person takes 14 hours to travel a distance of 48 km in a river. It takes 4 km in the direction of the flow and 3 km against the flow in the same time. What is the velocity of the flow?

Answer Options :

(1) 1 km/hr (2) 1.5 km/hr (3) 1.8 km/hr (4) 3.5 km/hr

---

21) The velocity of flow in a river is 1 km/hr. A motor boat takes 12 hours to travel 35 km upstream to the starting point. What is the speed of a motor boat in still water?

Answer Options :

(1) 6 km/hr (2) 7 km/hr (3) 8 km/hr (4) 5 km/hr

---

22) A boat takes 10 hours to cover a distance of 30 km upstream and 44 km downstream. The same boat takes 13 hours to cover a distance of 40 km upstream and 55 km downstream at the same speed. What is the speed of the boat in still water?

Answer Options :

(1) 3 km/hr (2) 8 km/hr (3) 11 km/hr (4) 12 km/hr

---

23) A boat covers some distance downstream in 1 hour and same distance upstream in $1\frac{1}{2}$ hours. If the speed of the flow is 3 km/hr, what will be the speed of the boat in still water?

Answer Options :

(1) 12 km/hr (2) 13 km/hr (3) 14 km/hr (4) 15 km/hr

24) The speed of a boat in still water is $9\frac{1}{3}$ km/hr. The time it takes to cover a certain distance in the direction of the flow, it takes three times the time to cover the same distance against the flow. What is the velocity of the flow?

Answer Options :

(1) $3\frac{1}{3}$ km/hr. (2) $3\frac{1}{3}$ km/hr.

(3) $4\frac{2}{3}$ km/hr. (4) $4\frac{1}{2}$ km/hr.

---

25) To cover a certain distance downstream, a boat takes half the time taken to go upstream. What is the ratio of the speed of the boat in still water to the speed of the flow?

Answer Options :

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

---

26) A boat covers a distance upstream in 8 hours 48 minutes and same distance downstream in 4 hours. What is the ratio of the speed of the boat to the speed of the flow in still water?

Answer Options :

(1) 2 : 1 (2) 3 : 2 (3) 8 : 3 (4) 5 : 3

---

27) A swimmer can swim at a speed of 5 km/hr in still water. If the speed of flow is 1 km/h then it takes 1 hour for this person to travel from one place to another place and back to the starting point. How far is it from the starting point?

Answer Options :

(1) 2.4 km (2) 2.5 km (3) 3 km (4) 3.6 km

---

28) A swimmer covers a distance of $\frac{3}{4}$ km against the flow in $11\frac{1}{4}$ minutes and returns to the starting point in $7\frac{1}{2}$ minutes. What is the speed of that person in calm water?

Answer Options :

(1) 2 km/hr (2) 3 km/hr (3) 4 km/hr (4) 5 km/hr

29) The velocity of flow in a river is 4 km/h. A boat travels 6 km upstream from a certain point and returns to the same point in 2 hours. Find the speed of the boat in still water and the time taken to go against the flow.

Answer Options :

(1) 8 km/h, 1 hour 30 minutes (2) 9 km/hr, 2 hrs 30 min

(3) 7 km/hr, 3 hrs 30 min (4) 6 km/hr, 4 hrs 30 min

---

30) A steamer takes the same time to cover 20 km upstream as it takes to cover 50 km downpstream. If the speed of the flow is 3 km/hr, find the speed of the steamer in still water.

Answer Options :

(1) 6 km/hr (2) 7 km/hr (3) 8 km/hr (4) 5 km/hr

---

31) A sailor takes 10 hours to travel 30 km upstream and 44 km downstream in his boat. It takes 13 hours to travel 40 km upstream and 55 km downstream. So find the speed of the flow and the speed of the boat in still water.

Answer Options :

(1) 5 km/h, 7 km/h (2) 4 km/h, 6 km/h

(3) 3 km/h, 8 km/h (4) 2 km/h, 5 km/h

---

32) A steamer takes 4 hours to travel downstream from one port to another. It takes 5 hours to cover the same distance upstream. If the speed of flow is 2 km/hr, find the distance between the two ports.

Answer Options :

(1) 80 km (2) 70 km (3) 60 km (4) 50 km

---

33) A sailor sails 30 km downstream in 3 hours 45 minutes and 15 km against the flow in 2 hours 30 minutes. So find the speed of the flow and the speed of the boat in still water.

Answer Options :

(1) 6 km/h, 2 km/h (2) 7 km/h, 1 km/h

(3) 5 km/h, 3 km/h (4) 8 km/h, 4 km/h

34) A person can swim at a speed of 5 km/hr in still water. To cover a certain distance downstream It takes three times of time to cover a same distance upstream. So find the velocity of flow.

Answer Options :

(1) 2.4 km/hr (2) 2.3 km/hr (3) 2.5 km/hr (4) 2.6 km/hr

---

35) A person takes 10 hours to cover a distance of 21 km from point A to point B against the river and back to point A. If she takes the same time to cover a distance of 7 km downstream as it does to cover a distance of 3 km against the flow, find the speed of the flow and the speed of the boat in still water.

Answer Options :

(1) 2 km/h, 5 km/h (2) 3 km/h, 2 km/h

(3) 4 km/h, 2 km/h (4) 6 km/h, 3 km/h

---

36) A swimmer can swim at a speed of 3.5 km/h in still water. If the time taken to cover a certain distance against the flow is twice the time taken to cover the same distance downstream, find the velocity of the flow.

Answer Options :

(1) 1.6 km/hr (2) 1.4 km/h

(3) 1.5 km/h (4) 1.7 km/h

---

37) If Sunil sails at a speed of 5 km/h and his speed against the flow is 3.5 km/h, what will be Sunil's speed downstream?

Answer Options :

(1) 4.25 km/hr (2) 6 km/hr (3) 6.5 km/h (4) 8.5 km/h

---

38) A boat travels from point A to B in upstream and from B to C in downstream in equal time. The ratio of distance from place A to B and from place B to C is 5 : 7. If the boat takes 2 hours 30 minutes to cover a distance of 35 km downstream, what is the speed of the flow? (in km/h)

Answer Options :

(1) 2 km/hr (2) 1.5 km/hr (3) 2.5 km/hr (4) 2.2 km/hr

39) A boat can travel 3.9 km in 13 minutes with favorable flow. If the speed of the flow is 3 km/h, how much distance (in km) can she cover against the flow in 28 minutes?

Answer Options :

(1) 5.8 (2) 5.6 (3) 4.8 (4) 6.2

---

40) The speed of a boat in calm water is 15 km/h and the speed of flow is 3 km/h. The distance covered by a boat from point A to point B downstream is 24 km more than the distance covered by the same boat from point B to point C against the flow. What will be the time taken to travel from C to B in the same time in the direction of flow through the boat?

Answer Options :

(1) 2 hours (2) 2 hours 30 minutes

(3) 3 hours 40 minutes (4) 2 hours 10 minutes

---

41) A boat has a speed of 6 km/hr in still water and a flow of 1.5 km/hr. A person goes by boat to a place located at a distance of 22.5 km and returns to the starting point. The total time taken by it is :

Answer Options :

(1) 6 hours 10 minutes (2) 4 hours 10 minutes

(3) 8 hours (4) 10 hours

---

42) A boat takes a total time of 285 minutes to travel x km downstream and (x - 5) upstream. If the difference between the boat's downstream speed and upstream speed is 3 km/h and the ratio of the boat's still water speed to the flow speed is 9 : 1, then what is the value of x ?

Answer Options :

(1) 40.4 (2) 30 (3) 20.4 (4) 34.4

---

43) A boat covers a distance of 75 km upstream in $7\frac{1}{2}$ hours. The speed of a boat in still water is five times the speed of the flow. If the speed of the stream is doubled, how far will it travel downstream in 4 hours?

Answer Options :

(1) 84 (2) 70 (3) 64 (4) Different from the given option

Answer Key

Q	A	Q	A	Q	A	Q	A	Q	A
1	**1**	11	**1**	21	**1**	31	**3**	41	**3**
2	**3**	12	**4**	22	**2**	32	**1**	42	**4**
3	**2**	13	**3**	23	**4**	33	**2**	43	**4**
4	**1**	14	**3**	24	**3**	34	**3**		
5	**4**	15	**4**	25	**2**	35	**1**		
6	**2**	16	**1**	26	**3**	36	**3**		
7	**4**	17	**3**	27	**1**	37	**3**		
8	**2**	18	**2**	28	**4**	38	**1**		
9	**3**	19	**1**	29	**1**	39	**2**		
10	**1**	20	**1**	30	**2**	40	**3**		

7. Ratio and Proportion

1) If the ratio of two numbers is 5:7 and their sum is 132, what is the difference between the numbers?

Answer Options :

(1) 55, 77 (2) 52, 77 (3) 53, 77 (4) 54, 77

2) If the ratio of two numbers is 8:3 and their difference is 75, find their sum.

Answer Options :

(1) 120, 46 (2) 120, 45 (3) 120, 47 (4) 120, 48

3) If the ratio of three numbers is 5:7 : 3 and adding 8 to each number gives the sum of 99, then state the smallest number.

Answer Options :

(1) 16 (2) 15 (3) 17 (4) 18

4) Find the numbers if the ratio of two numbers is 3:2 and the difference of their squares is 45.

Answer Options :

(1) 9, 4 (2) 9, 5 (3) 9, 7 (4) 9, 6

5) If the ratio of three numbers is 5:2 : 3 and the sum of their squares is 608, find the numbers.

Answer Options :

(1) 20, 8, 12 (2) 20, 9, 12 (3) 20, 7, 12 (4) 20, 6, 12

6) The ratio of two numbers is 3:4. After odding 8 in each number, the ratio of those numbers becomes 5:6. Find the numbers.

Answer Options :

(1) 14, 16 (2) 16, 17 (3) 12, 16 (4) 13, 15

7) The ratio of two numbers is 2:1. If subtracting 4 from each number gives the ratio of 9:4, find the numbers.

Answer Options :

(1) 40, 20 (2) 30, 20 (3) 50, 20 (4) 60, 20

8) The ratio of two numbers is 8:5. If 8 is added to the larger number and 5 is subtracted from the smaller number, the larger number becomes twice the smaller number, then find the number?

Answer Options :

(1) 72, 44 (2) 72, 46 (3) 72, 45 (4) 72, 43

---

9) The ratio of cost of a chair and a table is 5:7. If the price of one chair is Rs.225, find the selling price of 3 tables?

Answer Options :

(1) 314 Rs., 945 Rs. (2) 312 Rs., 945 Rs.

(3) 311 Rs., 945 Rs. (4) Rs.315, Rs.945.

---

10) The ratio of price of a wooden bed and an iron cupboard is 7:3. If the cost of one bed is Rs.11200. If so, how much is the cost of 4 cupboards? Alternative Answers:

Answer Options :

(1) 4800 Rs., 19200 Rs. (2) 4600 Rs., 19300 Rs.

(3) 4500 Rs., 19100 Rs. (4) 4700 Rs., 19400 Rs.

---

11) If the ratio of three numbers is 8:5 : 7 and their sum is 140, find the smaller number.

Answer Options :

(1) 37 (2) 36 (3) 34 (4) 35

---

12) If the ratio of two numbers is 8:5 and their difference is 144, state the larger number.

Answer Options :

(1) 385 (2) 384 (3) 386 (4) 387

---

13) If the ratio of three numbers is 5:4:6 and 9 is added to each number, their sum is 132, then state the smaller number.

Answer Options :

(1) 27 (2) 26 (3) 25 (4) 28

---

14) If the ratio of two numbers is 8 : 11 and the difference of their squares is 57, then which number is greater?

Answer Options :

(1) 12 (2) 14 (3) 11 (4) 15

15) If the ratio of three numbers is 1:2 :3 and the sum of their squares is 56, find the larger number.

Answer Options :

(1) 8 (2) 6 (3) 7 (4) 5

---

16) The ratio of two numbers is 4 : 3. If 10 added to each number, the ratio is 37 : 29, find the number.

Answer Options :

(1) 64, 48 (2) 65, 46 (3) 66, 45 (4) 63, 44

---

17) The ratio of two numbers is 4:3. If 10 is added in each number then the ratio is 37 : 29 then find the numbers.

Answer Options :

(1) 72, 52 (2) 66, 44 (3) 64, 48 (4) 68, 42

---

18) The ratio of two numbers is 3:4. If 18 is added to the smaller number and 4 is added to the larger number, the ratio of those numbers is 1:1. So find the original number.

Answer Options :

(1) 42, 56 (2) 42, 55 (3) 42, 54 (4) 42, 53

---

19) The ratio of two numbers is 5:7. If 3 is added to the smaller number and 3 is subtracted from the larger number, the ratio is 4:5, find the number.

Answer Options :

(1) 42, 63 (2) 43, 63 (3) 42, 63 (4) 45, 63

---

20) Height ratio of Dheeraj and Dharti is 5:3. If their height difference is 44cm then what is the height of Dharti?

Answer Options :

(1) 66cm (2) 65cm (3) 64cm (4) 63cm

---

21) The ratio of marks obtained by Seema and Rani is 2:1. Next year if Seema's marks decrease by 50% and Rani's marks increase by 50%, what is the new ratio?

Answer Options :

(1) 2 : 4 (2) 2 : 3 (3) 2 : 5 (4) 2 : 6

22) In a college, the ratio of students from arts to science is 3:5. What is the new ratio if 50% of Arts students decreose in next year and 25% science students increase in the some yeor?

Answer Options :

(1) 6 : 24 (2) 6 : 23 (3) 6 : 25 (4) 6 : 22

---

23) The ratio of two numbers is 8:3. If the larger number is inecreased by 25% and the smaller number is increased by 50%, what will be the ratio?

Answer Options :

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

---

24) The ratio of dheeraj and dharti weights is 5:4. If Dheeraj loses weight by 20% and Dharti gains weight by 25%, what is the ratio of their weights?

Answer Options :

(1) Dheeraj and Dharti = 4:3 (2) Dheeraj and Dharti = 4:5

(3) Dheeraj and Dharti = 4:2 (4) Dheeraj and Dharti = 4:1

---

25) Which number should be subtracted from the numbers 9, 13, 25, and 37 so that these numbers come in proportion.

Answer Options :

(1) 3 (2) 4 (3) 2 (4) 1

---

26) What number should be subtracted from 7, 15, 19, and 51 so that these numbers are proportional.

Answer Options :

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

---

27) Which number should be subtracted from the numbers 4, 8, 11 and 29 so that the numbers come in proportion.

Answer Options :

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

---

28) Which number should be subtracted from the numbers 11, 19, 14, 25 so that these numbers come in proportion.

Answer Options :

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

29) If the sum of two numbers is 60 and their subtraction is 10, then what is the ratio of those numbers?

Answer Options :

(1) $\frac{7}{5}$ (2) $\frac{6}{5}$ (3) $\frac{8}{5}$ (4) $\frac{9}{5}$

---

30) If the sum of two numbers is 91 and their difference is 13, find the numbers and find their ratio.

Answer Options :

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

---

31) If the sum of two numbers is 120 and their subtraction is 90, find the numbers and state their ratio.

Answer Options :

(1) 7 : 1 (2) 7 : 2 (3) 7 : 3 (4) 7 : 4

---

32) If $\frac{x}{y} = \frac{3}{4}$ then $\frac{x+y}{x-y} = ?$

Answer Options :

(1) $\frac{4}{1}$ (2) $\frac{5}{1}$ (3) $\frac{6}{1}$ (4) $-\frac{7}{1}$

---

33) If $\frac{a}{b} = \frac{5}{9}$ then $\frac{b-a}{b+a} = ?$

Answer Options :

(1) $\frac{4}{7}$ (2) $\frac{2}{7}$ (3) $\frac{6}{7}$ (4) $\frac{5}{7}$

---

34) $\frac{m}{n} = \frac{2}{5}$ so $\frac{m^2-n^2}{m^2+n^2} = ?$

Answer Options :

(1) $-\frac{21}{29}$ (2) $-\frac{22}{29}$ (3) $-\frac{23}{29}$ (4) $-\frac{24}{29}$

35) If $\frac{x}{3} = \frac{y}{4} = \frac{z}{5}$ then $\frac{x+y+z}{z}$ = ?

Answer Options :

(1) $\frac{14}{5}$ (2) $\frac{13}{5}$ (3) $\frac{12}{5}$ (4) $\frac{15}{5}$

---

36) If $\frac{a}{7} = \frac{b}{3} = \frac{c}{5}$ then $\frac{a+b-c}{a}$ = ?

Answer Options :

(1) $\frac{6}{7}$ (2) $\frac{8}{7}$ (3) $\frac{5}{7}$ (4) $\frac{4}{7}$

---

37) $\frac{a}{2} = \frac{b}{5} = \frac{c}{3}$ so $\frac{a+b+c}{c}$ = ?

Answer Options :

(1) $\frac{10}{3}$ (2) $\frac{13}{3}$ (3) $\frac{12}{3}$ (4) $\frac{15}{3}$

---

38) $\frac{a}{b} = \frac{b}{7}$ so $\frac{a+b}{a-b}$ = ?

Answer Options :

(1) $\frac{-4}{2}$ (2) $\frac{-3}{2}$ (3) $\frac{-5}{2}$ (4) $\frac{-6}{2}$

---

39) $\frac{a}{2} = \frac{b}{3} = \frac{c}{11}$ so $\frac{a+b+c}{c}$ = ?

Answer Options :

(1) $\frac{15}{11}$ (2) $\frac{13}{11}$ (3) $\frac{16}{11}$ (4) $\frac{12}{11}$

---

40) $\frac{m}{2} = \frac{n}{5} = \frac{p}{7}$ so $\frac{m-n+p}{n}$ = ?

Answer Options :

(1) $\frac{4}{5}$ (2) $\frac{3}{5}$ (3) $\frac{6}{5}$ (4) $\frac{7}{5}$

41) $\frac{x}{5} = \frac{y}{7}$ so $\frac{x^2 + y^2}{(x + y)} = ?$

Answer Options :

(1) $\frac{37}{6}$ (2) $\frac{36}{6}$ (3) $\frac{37}{6}$ (4) $\frac{35}{6}$

Answer Key

Q	A	Q	A	Q	A	Q	A	Q	A
1	**1**	11	**4**	21	**2**	31	**1**	41	**3**
2	**2**	12	**2**	22	**3**	32	**4**		
3	**2**	13	**4**	23	**1**	33	**2**		
4	**4**	14	**3**	24	**2**	34	**1**		
5	**1**	15	**2**	25	**4**	35	**3**		
6	**3**	16	**1**	26	**3**	36	**3**		
7	**1**	17	**3**	27	**1**	37	**1**		
8	**3**	18	**1**	28	**3**	38	**3**		
9	**4**	19	**4**	29	**1**	39	**3**		
10	**1**	20	**1**	30	**2**	40	**1**		

8. Average

1) Average of first consecutive natural numbers starting from 1 up to = $\frac{1^{st} + \text{last number}}{2}$

Answer Options :

(1) 8 (2) 9 (3) 7 (4) 10

---

2) Average of 1, 2, 3, 4, ...26 ?

Answer Options :

(1) 14.5 (2) 13.5 (3) 15.5 (4) 12.5

---

3) A cricketer scored 102, 55 and 71 runs in 3 innings respectively how many runs should he score in the 4^{th} innings so that his 4 innings average will be 100?

Answer Options :

(1) 140 (2) 170 (3) 172 (4) 160

---

4) A cricketer scored 78, 15, 81 and 93 runs in first 4 innings respectively. How many runs should he score in the 5^{th} innings so that his 5 innings average is 75?

Answer Options :

(1) 108 (2) 107 (3) 105 (4) 104

---

5) Average sales of a shopkeeper for 12 months is Rs.2500. The average sales for the first 4 months is Rs 2125 and the average sales for the next 4 months are Rs 2225. So calculate the average sales for the last 4 months.

Answer Options :

(1) 3150 Rs. (2) 3050 Rs (3) 3250 Rs. (4) 3350 Rs.

---

6) Average sales of a shopkeeper for 10 months is Rs.2250. Average sales for first 3 months Rs. 1800 Average sales for next 4 months Rs 1950 calculate Average sales for last 3 months ?

Answer Options :

(1) 3000 Rs. (2) 3100 Rs. (3) 3200 Rs. (4) 3500 Rs.

---

7) Average sales in a week is Rs. 500. The average sales of the first 4 days is Rs. 480 and the average sales of the last 4 days are Rs. 510. then what is the sale for 4^{th} day.

Answer Options :

(1) 460 Rs. (2) 400 Rs. (3) 520 Rs. (4) 500 Rs.

8) The average temperature for a week in the month of May was 43.1°C. If the average temperature of the first 3 days was 44.2°C and the average temperature of the last 5 days was 41°C, find the temperature of the third day?

Answer Options :

(1) 35.9°C (2) 34.9°C (3) 36.9°C (4) 38.9°C

9) Average of first 6 multiples of 5 ?

Answer Options :

(1) 16.5 (2) 17.5 (3) 14.5 (4) 15.5

10) What is the average of the first 7 factors in multiples of 4?

Answer Options :

(1) 15 (2) 16 (3) 17 (4) 14

11) Average of first 5 odd foctors of multiples of 7 ?

Answer Options :

(1) 35 (2) 34 (3) 32 (4) 30

12) Average monthly income of W, X, Y, Z is Rs.12000. If the ratio of their income is 6 : 7 : 8 : 3 then what is the income of W?

Answer Options :

(1) 4000 (2) 5000 (3) 6000 (4) 7000

13) Average price of three articles is 12500 and their price ratio is 3 : 9 : 13 then what is the price of the most expensive article?

Answer Options :

(1) 14500 (2) 17500 (3) 18500 (4) 19500

14) There are 600 students in a school. The average age of boys is 12 and the average age of girls is 11. Average age of all the students in the school is 11 years 9 months then how many boys and girls in the school?

Answer Options :

(1) Boys 350, Girls = 100 (2) Boys 450, Girls 150

(3) Boys 250, Girls = 160 (4) Boys 550, Girls = 150

15) A girl accumulated Rs 185 in her savings account in 10 months and the savings decreased in the next 2 months. If this makes the average for the year 0.50 less than the average of the first 10 months, how much did she save in the remaining 2 months?

Answer Options :

(1) 34 Rs. (2) 32 Rs. (3) 31 Rs. (4) 30 Rs.

---

16) There are 35 students in a hostel and the addition of 17 new students increases the total cost of the mess by Rs.42 per day. However the average cost per student decreases by 1. So how much was the total cost of mess in the beginning?

Answer Options :

(1) 420 Rs. (2) 320 Rs. (3) 520 Rs. (4) 220 Rs.

---

17) The average age of all the students in a class is 15.8 years. The average age of the boys in the class is 16.4 years and the average age of the girls is 15.4 years. So what is the ratio of the number of boys and girls in the class?

Answer Options :

(1) m = $\frac{4}{3}$, Boys : Girls = $\frac{4}{3}$: 1 or 2:3

(2) m = $\frac{2}{3}$, Boys : Girls = $\frac{2}{3}$: 1 or 2 : 3

(3) m = $\frac{5}{3}$, Boys : Girls = $\frac{5}{3}$: 1 or 2 : 3

(4) m = $\frac{6}{3}$, Boys : Girls = $\frac{6}{3}$: 1 or 2 : 3

---

18) If Ajay scored 80, 68, 82, 56, 74 in 5 subjects in the exam, what is the average score of Ajay?

Answer Options :

(1) 72 marks (2) 74 marks (3) 65 marks (4) 80 marks

---

19) If the average of 4 consecutive even numbers is 45, (1) Which number is the smallest among them (2) What is the average of the smallest number and the largest number?

Answer Options :

(1) 50 (2) 45 (3) 40 (4) 35

20) Average of 4 consecutive odd numbers is 42, then what is the difference between the smallest and largest number.

Answer Options :

(1) 7 (2) 4 (3) 6 (4) 8

---

21) If the average of 4 consecutive even numbers is 35, then what is the smallest number among them?

Answer Options :

(1) 34 (2) 30 (3) 31 (4) 32

---

22) Average of 5 consecutive even numbers is 47, so what is the largest number among them?

Answer Options :

(1) 41 (2) 31 (3) 61 (4) 51

---

23) If the average of 7 consecutive even numbers is 10, then the largest even number is how many times the smallest number?

Answer Options :

(1) 4 (2) 3 (3) 7 (4) 5

---

24) Average of 5 consecutive even numbers is 66, then what is the sum of first and last number?

Answer Options :

(1) 134 (2) 132 (3) 135 (4) 130

---

25) If the average of 5 consecutive even numbers is 36, then the smallest number is how many times the largest number?

Answer Options :

(1) $\frac{4}{5}$ times (2) $\frac{3}{5}$ times (3) $\frac{2}{5}$ times (4) $\frac{5}{5}$ times

---

26) Average of 8 consecutive odd numbers is 14 then (1) How many times the largest number is the smallest number. (2) How many times the smallest number is the largest number?

Answer Options :

(1) Smaller number - 8, larger number = 20

(2) Smaller number - 7, Larger number = 21

(3) Small number - 10, Large number = 22
(4) Smaller number - 7, Larger number = 23

---

27) The average of 5 consecutive odd numbers is 35 and the average of the next 5 odd numbers is 45. What is the average of all those ten numbers.

Answer Options :

(1) 50 (2) 30 (3) 40 (4) 60

---

28) Out of 60 students who passed an examination, the first 20 students scored an average of 70% marks. If the last 20 students get 64% average marks and the rest get 40% average marks, what is the average marks of the total passed students?

Answer Options :

(1) 50 % (2) 64 % (3) 40 % (4) 58 %

---

29) Out of a total of 100 students in a class, if the first 50 students get an average of 50% marks and the remaining 50 students get an average of 40% marks, what is the average marks of all the students?

Answer Options :

(1) 47 % (2) 48 % (3) 45 % (4) 40 %

---

30) Average of 5 consecutive odd numbers is 37. The average of the next 5 odd numbers is 47. What is the average of all those ten numbers?

Answer Options :

(1) 47 % (2) 48 % (3) 42% (4) 40 %

---

31) Out of 50 students in a class, the average age of 25 students is 15 and if the average age of the remaining 25 students is the same, what is the average age of the 50 students?

Answer Options :

(1) 15 (2) 14 (3) 17 (4) 18

---

32) If the average of the numbers 35, 39, 45, 36 and 4* is 39, then what digit will replace *.

Answer Options :

(1) 1 (2) 2 (3) 0 (4) 8

---

33) If the average of the numbers 32, 37, 41, 43, 48, 5*, 55 is 44, then what digit will be in place of *.

Answer Options :

(1) 1 (2) 3 (3) 4 (4) 2

---

34) If the average of the numbers 48, 43, 46, 40, 47, 41 and 4* is 44, find the number if * is replaced by the same digit.

Answer Options :

(1) 3 (2) 2 (3) 5 (4) 8

---

35) Average of the numbers 48, *4 and 5* is 45. Find the same digit in place of * in both the numbers.

Answer Options :

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

---

36) 73, *5 and 7*. Average of these numbers will be 75 and what digit will be in place of *.

Answer Options :

(1) 6 (2) 8 (3) 9 (4) 7

---

37) The average age of 20 students in a class is 14 years. If the age of the class teacher is taken, their average is 15. So how old is the class teacher?

Answer Options :

(1) 35 years (2) 32 years (3) 30 years (4) 20 years

---

38) Average age of 22 people is 40 years. If the age of one person is added to it the average becomes 42 years. then what is the age of the new person?

Answer Options :

(1) 85 years (2) 86 years (3) 84 years (4) 82 years

---

39) 25 children of average weight 22 kg sat in a boat. If the average weight of all including Sailor becomes 24 kg, what is the weight of the Sailor?

Answer Options :

(1) 74 kg (2) 76 kg (3) 72 kg (4) 70 kg

---

40) Amit scored an average of 65 marks in 4 subjects namely Mathematics, Marathi, Science and History. But the marks obtained in English reduced the average marks in 5 subjects by 5. So how many marks did you get in English?

Answer Options :

(1) 60 marks (2) 50 marks (3) 30 marks (4) 40 marks

41) If the average age of 40 students in a class is 12.5 years and the average age of all including the class teacher is 13 years, what is the age of the class teacher?

Answer Options :

(1) 33 years (2) 44 years (3) 22 years (4) 55 years

---

42) The average age of 60 children in a class is 16.95 years. But if the average age of the class increases to 17 years due to the arrival of a new student, what is the age of the new student?

Answer Options :

(1) 40 years (2) 50 years (3) 20 years (4) 30 years

---

43) Average sales of a shopkeeper for 12 months is Rs.5600. If the gross sales for the first 6 months are Rs.4200, what is the total sales for the last 6 months?

Answer Options :

(1) 40000/- (2) 42000/- (3) 44000/- (4) 43000/-

---

44) A shopkeeper sold goods worth Rs.3100 on average in 60 days. it sold an average of Rs 1800 worth of goods in the first 30 days. So in the remaining 30 days how much tatal total goods he sold?

Answer Options :

(1) 132000/- (2) 142000/- (3) 130000/- (4) 103000/-

---

45) 30 days average sales of a shopkeeper is Rs.155. Average sales for 1st 15 days it Rs.190. So what is the average sales for the next 15 days?

Answer Options :

(1) 140/- (2) 120/- (3) 130/- (4) 130/-

---

46) The average weekly sales of a salesman is Rs.300. Average sales for 1st 5 days is Rs 320 and average sales for last 3 days is Rs 240. What is the sales on Friday?

Answer Options :

(1) 220 Rs. (2) 210 Rs. (3) 230 Rs. (4) 240 Rs.

---

47) In a cricket match, average of runs in 30 matches is 50, out of which the average of first 18 mtches is 30, then what is the average of remaining matches?

Answer Options :

(1) 40 (2) 20 (3) 50 (4) 80

48) The first 50 students in a class scored an average of 48 marks. The remaining 25 students scored an average of 54. What is the average score of the total students in the class?

Answer Options :

(1) 50 (2) 40 (3) 60 (4) 70

Answer Key

Q	A	Q	A	Q	A	Q	A	Q	A
1	**1**	11	**1**	21	**4**	31	**1**	41	**1**
2	**2**	12	**3**	22	**4**	32	**3**	42	**3**
3	**3**	13	**4**	23	**1**	33	**3**	43	**2**
4	**1**	14	**2**	24	**2**	34	**1**	44	**1**
5	**1**	15	**3**	25	**1**	35	**2**	45	**2**
6	**2**	16	**1**	26	**2**	36	**4**	46	**1**
7	**3**	17	**2**	27	**3**	37	**1**	47	**4**
8	**1**	18	**1**	28	**4**	38	**2**	48	**1**
9	**2**	19	**2**	29	**3**	39	**1**		
10	**2**	20	**3**	30	**3**	40	**4**		

2. Simple and Real Fractions

1) $\frac{9}{23} - \frac{5}{11} = ?$

पर्यायी उत्तरे :

(1) $\frac{-16}{253}$ (2) $\frac{-15}{253}$ (3) $\frac{-14}{253}$ (4) $\frac{-13}{253}$

---

2) $\frac{17}{4} + x = \frac{16}{5}$ **तर** $x = ?$

पर्यायी उत्तरे :

(1) $\frac{-22}{20}$ (2) $\frac{-21}{20}$ (3) $\frac{-24}{20}$ (4) $\frac{-23}{20}$

---

3) $\frac{11}{7} + m = \frac{9}{5}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{8}{35}$ (2) $\frac{7}{35}$ (3) $\frac{6}{35}$ (4) $\frac{5}{35}$

---

4) $\frac{5}{3} + \frac{9}{5} + m = \frac{11}{3}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{-3}{4}$ (2) $\frac{-2}{4}$ (3) $\frac{-1}{4}$ (4) $\frac{-5}{4}$

---

5) $\frac{2}{11} + \frac{3}{7} + x = \frac{4}{9}$ **तर** $x = ?$

पर्यायी उत्तरे :

(1) $\frac{-115}{693}$ (2) $\frac{-114}{693}$ (3) $\frac{-113}{693}$ (4) $\frac{-116}{693}$

---

6) $\frac{15}{11} - m = \frac{3}{4}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{26}{44}$ (2) $\frac{27}{44}$ (3) $\frac{24}{44}$ (4) $\frac{25}{44}$

---

7) $\frac{25}{13} - x = \frac{9}{7}$ **तर** $x = ?$

पर्यायी उत्तरे :

(1) $\frac{56}{91}$ (2) $\frac{57}{91}$ (3) $\frac{58}{91}$ (4) $\frac{55}{91}$

---

8) $\frac{3}{4} + \frac{9}{5} + m = \frac{17}{11}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{221}{220}$ (2) $\frac{222}{220}$ (3) $\frac{223}{220}$ (4) $\frac{224}{220}$

---

9) $\frac{5}{3} + m = \frac{9}{4}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{8}{12}$ (2) $\frac{7}{12}$ (3) $\frac{9}{12}$ (4) $\frac{6}{12}$

---

10) $\frac{15}{17} + x = \frac{21}{20}$ **तर** $x = ?$

पर्यायी उत्तरे :

(1) $\frac{57}{340}$ (2) $\frac{56}{340}$ (3) $\frac{58}{340}$ (4) $\frac{55}{340}$

---

11) $\frac{9}{11} + \frac{5}{4} + m = \frac{9}{13}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{785}{572}$ (2) $\frac{786}{572}$ (3) $\frac{787}{572}$ (4) $\frac{789}{572}$

---

12) $\frac{3}{4} + \frac{5}{7} - m = \frac{2}{5}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{149}{140}$ (2) $\frac{148}{140}$ (3) $\frac{146}{140}$ (4) $\frac{147}{140}$

---

13) $\frac{7}{11} - x = \frac{3}{13}$ **तर** $x = ?$

पर्यायी उत्तरे :

(1) $\frac{59}{143}$ (2) $\frac{58}{143}$ (3) $\frac{56}{143}$ (4) $\frac{57}{143}$

---

14) $\frac{5}{7} + \frac{9}{7} = ?$

पर्यायी उत्तरे :

(1) 2 (2) 4 (3) 5 (4) 6

---

15) $\frac{3}{11} + \frac{15}{11} + \frac{23}{11} = ?$

पर्यायी उत्तरे :

(1) $\frac{42}{11}$ (2) $\frac{43}{11}$ (3) $\frac{41}{11}$ (4) $\frac{45}{11}$

---

16) $\frac{16}{15} + \frac{25}{15} - \frac{13}{15} = ?$

पर्यायी उत्तरे :

(1) $\frac{28}{15}$ (2) $\frac{26}{15}$ (3) $\frac{25}{15}$ (4) $\frac{27}{15}$

---

17) $\frac{5}{4} + \frac{9}{3} + \frac{11}{12} - \frac{1}{6} = ?$

पर्यायी उत्तरे :

(1) 6 (2) 4 (3) 5 (4) 3

---

18) $\frac{5}{28} + \frac{11}{7} - \frac{3}{4} = ?$

पर्यायी उत्तरे :

(1) 4 (2) 3 (3) 2 (4) 1

19) $\frac{3}{20}+\frac{9}{4}-\frac{11}{5}+m=7$ **तर** $m=?$

पर्यायी उत्तरे :

(1) $\frac{35}{5}$ (2) $\frac{34}{5}$ (3) $\frac{32}{5}$ (4) $\frac{36}{5}$

---

20) $\frac{15}{8}+\frac{9}{5}-\frac{11}{10}=?$

पर्यायी उत्तरे :

(1) $\frac{105}{40}$ (2) $\frac{103}{40}$ (3) $\frac{102}{40}$ (4) $\frac{106}{40}$

---

21) $\frac{7}{18}-\frac{11}{36}+\frac{19}{24}=?$

पर्यायी उत्तरे :

(1) $\frac{7}{8}$ (2) $\frac{6}{8}$ (3) $\frac{5}{8}$ (4) $\frac{8}{8}$

---

22) $\frac{9}{5}+\frac{11}{15}-\frac{7}{3}=?$

पर्यायी उत्तरे :

(1) $\frac{1}{6}$ (2) $\frac{1}{5}$ (3) $\frac{1}{7}$ (4) $\frac{1}{8}$

---

23) $\frac{4}{21}-\frac{5}{9}+\frac{7}{3}=?$

पर्यायी उत्तरे :

(1) $\frac{124}{63}$ (2) $\frac{125}{63}$ (3) $\frac{126}{63}$ (4) $\frac{127}{63}$

---

24) $\frac{15}{8}+\frac{11}{24}-\frac{3}{5}+\frac{1}{6}=?$

पर्यायी उत्तरे :

(1) $\frac{18}{10}$ (2) $\frac{15}{10}$ (3) $\frac{16}{10}$ (4) $\frac{19}{10}$

25) $\frac{9}{5}+\frac{11}{6}+\frac{7}{15}+m=3$

पर्यायी उत्तरे :

(1) $\frac{-11}{10}$ (2) $\frac{-12}{10}$ (3) $\frac{-13}{10}$ (4) $\frac{-14}{10}$

---

26) $\frac{4}{3}+\frac{11}{2}-\frac{17}{5}+x=11$ **तर** $x=?$

पर्यायी उत्तरे :

(1) $\frac{-226}{30}$ (2) $\frac{-227}{30}$ (3) $\frac{-225}{30}$ (4) $\frac{-224}{30}$

---

27) $\frac{9}{5} \times \frac{7}{3}=?$

पर्यायी उत्तरे :

(1) $\frac{22}{5}$ (2) $\frac{21}{5}$ (3) $\frac{23}{5}$ (4) $\frac{24}{5}$

---

28) $\frac{5}{11} \times \frac{44}{13} \times \frac{26}{10}=?$

पर्यायी उत्तरे :

(1) 6 (2) 4 (3) 5 (4) 7

---

29) $\frac{9}{17} \times \frac{-102}{21} \times \frac{-1}{3}=?$

---

30) $\frac{92}{119} \times \frac{-17}{23} \times \frac{49}{4}=?$

पर्यायी उत्तरे :

(1) -6 (2) -5 (3) -7 (4) -8

---

31) $\frac{9}{17} \div \frac{45}{51}=?$

पर्यायी उत्तरे :

(1) $\frac{3}{5}$ (2) $\frac{4}{5}$ (3) $\frac{7}{5}$ (4) $\frac{6}{5}$

---

32) $\frac{5}{16} \times \frac{32}{7} \div \frac{32}{28} = ?$

पर्यायी उत्तरे :

(1) $\frac{6}{4}$ (2) $\frac{5}{4}$ (3) $\frac{7}{4}$ (4) $\frac{8}{4}$

---

33) $\frac{9}{7} \div \frac{11}{5} \times \frac{44}{25} \div \frac{18}{21} = ?$

पर्यायी उत्तरे :

(1) $\frac{6}{5}$ (2) $\frac{5}{5}$ (3) $\frac{7}{5}$ (4) $\frac{8}{5}$

---

34) $\frac{15}{16} \div \frac{-19}{96} \div \frac{30}{57} = ?$

पर्यायी उत्तरे :

(1) -8 (2) -9 (3) -6 (4) -7

---

35) $\frac{9}{13} \div \frac{17}{23} \div \frac{-119}{92} \times \frac{65}{27} \div \frac{-20}{21} = ?$

पर्यायी उत्तरे :

(1) 2 (2) 1 (3) 3 (4) 4

---

36) $\frac{9/13}{25/26} = ?$

पर्यायी उत्तरे :

(1) $\frac{19}{25}$ (2) $\frac{17}{25}$ (3) $\frac{18}{25}$ (4) $\frac{16}{25}$

---

37) $\frac{3/7}{9/49} = ?$

पर्यायी उत्तरे :

(1) $\frac{6}{3}$ (2) $\frac{7}{3}$ (3) $\frac{8}{3}$ (4) $\frac{5}{3}$

---

38) $\frac{35}{18} \times \frac{9}{7} + \frac{8}{3} \times \frac{24}{40} = ?$

पर्यायी उत्तरे :

(1) $\frac{42}{10}$ (2) $\frac{40}{10}$ (3) $\frac{41}{10}$ (4) $\frac{43}{10}$

---

39) $\frac{\frac{2}{3} + \frac{9}{5}}{\frac{3}{5} - \frac{2}{9}} = ?$

पर्यायी उत्तरे :

(1) $\frac{110}{17}$ (2) $\frac{111}{17}$ (3) $\frac{109}{17}$ (4) $\frac{112}{17}$

---

40) $\frac{5}{7} \times \frac{14}{25} + \frac{6}{5} \times \frac{60}{45} - \frac{15}{4} \times \frac{8}{9} = ?$

पर्यायी उत्तरे :

(1) $\frac{-64}{30}$ (2) $\frac{-62}{30}$ (3) $\frac{-61}{30}$ (4) $\frac{-63}{30}$

---

41) $\frac{7}{5} + \frac{2}{8} \times \frac{16}{18} - \frac{15}{17} \div \frac{135}{34} = ?$

पर्यायी उत्तरे :

(1) $\frac{7}{5}$ (2) $\frac{6}{5}$ (3) $\frac{5}{5}$ (4) $\frac{8}{5}$

---

42) $\frac{11}{3} \times \frac{9}{4} + \frac{19}{2} \div \frac{38}{2} - \frac{18}{23} \times \frac{92}{144} = ?$

पर्यायी उत्तरे :

(1) $\frac{32}{4}$ (2) $\frac{33}{4}$ (3) $\frac{35}{4}$ (4) $\frac{34}{4}$

43) $\frac{7}{2} \div \frac{21}{10} - \frac{11}{13} \div \frac{55}{78} + \frac{17}{19} \times \frac{76}{85} = ?$

पर्यायी उत्तरे :

(1) $1\frac{4}{15}$ (2) $1\frac{5}{15}$ (3) $1\frac{7}{15}$ (4) $1\frac{6}{15}$

---

44) $\frac{2}{3} + \frac{7}{3} \times \frac{4}{5} = ?$

पर्यायी उत्तरे :

(1) $\frac{36}{15}$ (2) $\frac{35}{15}$ (3) $\frac{38}{15}$ (4) $\frac{37}{15}$

---

45) $\frac{9}{7} \div \frac{36}{35} - \frac{11}{28} \div \frac{77}{8} = ?$

पर्यायी उत्तरे :

(1) $\frac{237}{196}$ (2) $\frac{236}{196}$ (3) $\frac{235}{196}$ (4) $\frac{238}{196}$

---

46) $\frac{2}{5} + \frac{3}{4} + m = \frac{9}{7}$ **तर** $m = ?$

पर्यायी उत्तरे :

(1) $\frac{19}{140}$ (2) $\frac{20}{140}$ (3) $\frac{18}{140}$ (4) $\frac{17}{140}$

---

47) $\left(\frac{5}{6} + \frac{2}{3} - \frac{7}{12}\right) \div \frac{44}{36} = ?$

पर्यायी उत्तरे :

(1) $\frac{2}{4}$ (2) $\frac{3}{4}$ (3) $\frac{4}{4}$ (4) $\frac{6}{4}$

Answer Key

Q	A	Q	A	Q	A	Q	A	Q	A
1	**1**	11	**3**	21	**1**	31	**1**	41	**1**
2	**2**	12	**1**	22	**2**	32	**2**	42	**2**
3	**1**	13	**2**	23	**1**	33	**1**	43	**1**
4	**3**	14	**1**	24	**4**	34	**2**	44	**3**
5	**1**	15	**3**	25	**1**	35	**2**	45	**1**
6	**2**	16	**1**	26	**2**	36	**3**	46	**1**
7	**3**	17	**3**	27	**2**	37	**2**	47	**2**
8	**1**	18	**4**	28	**2**	38	**3**		
9	**2**	19	**2**	29	**1**	39	**2**		
10	**1**	20	**2**	30	**3**	40	**3**		