1. Questions

Study the following information carefully and answer the questions.

The given table chart shows the total number of masks distributed (surgical + barrier) on five different days namely Monday, Tuesday, Wednesday, Thursday and Friday and also given the percentage of the number of surgical masks distributed on these five days.

Days	The total number of masks distributed	Percentage of the number of surgical masks distributed
Monday	1600	40%
Tuesday	1250	60%
Wednesday	1450	30%
Thursday	1800	75%
Friday	1180	20%

The number of surgical masks distributed on Saturday is 5% more than that on Monday and the ratio of the number of barrier masks distributed on Tuesday to Saturday is 125:y. If the total number of (surgical + barrier)masks distributed on Saturday is 12% more than that on Tuesday, then find the value of y.

a. 155

b. 182

c. 221

d. 167

e. 290

2. Questions

If the number of barrier masks distributed on Tuesday is decreased by 18%, then find the difference between the number of barrier masks distributed on Tuesday and Friday.

a. 310

b. 420

c. 344

d. 267

e. 534

3. Questions

The ratio of the number of surgical to barrier masks distributed to males on Thursday is 5:0.5 and the number of surgical masks distributed to females on Thursday is equal to the number of barrier masks distributed to females on the same day. Find the number of surgical masks distributed to

males on Thursday.

a. 1000

b. 900

c. 750

d. 800

e. 680

4. Questions

The ratio of the number of surgical,N95 and face masks distributed on Wednesday is 5:7:9 respectively and the number of N95 and face masks sold on Friday is 10 and 16 more than that on Wednesday respectively. Find the difference between the number of face masks and N95 masks distributed on Friday.

a. 125

b. 149

c. 180

d. 130

e. 128

5. Questions

The number of barrier masks distributed on Monday is what percentage more than the number of surgical masks distributed on Tuesday?

a. 32%

b. 54%

c. 28%

d. 40%

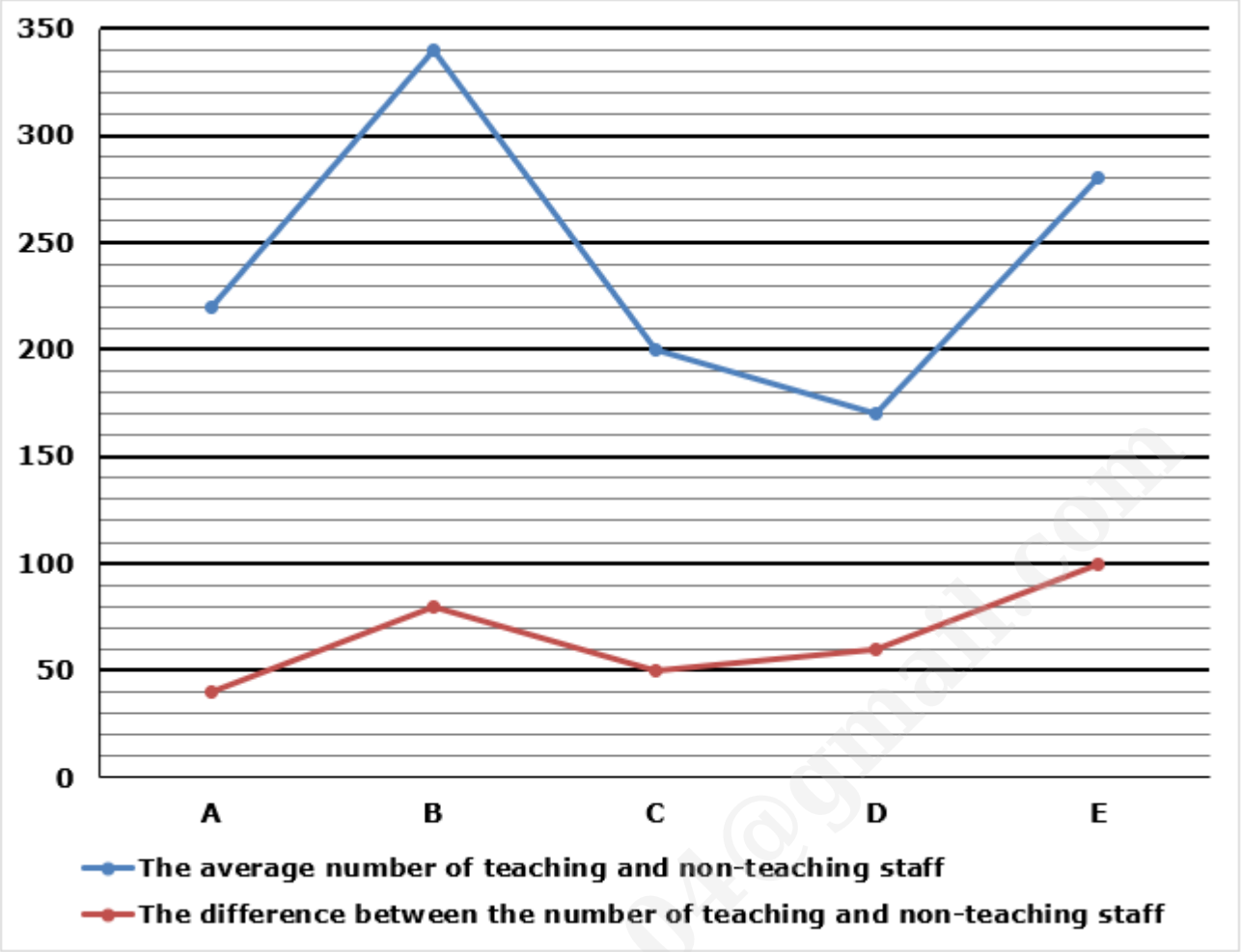
e. 15%

6. Questions

Study the following information carefully and answer the questions.

The given line graph shows the average number of staff (teaching and non-teaching) in five different schools namely A, B, C, D and E and the difference between the number of teaching and non-teaching staff in these five schools.

Note: In each school, the number of teaching staffis more than that of non-teaching staff.



In schools A and D, there are only two types of teaching staff members- P and Q. The ratio of the number of P to Q type teaching staff in schools A and D is 2:1 and 2:3 respectively. Find the difference between the number of P type teaching staff in school A and the number of Q type teaching staff in school D.

a. 30

b. 40

c. 80

d. 20

e. 45

7. Questions

If the number of non-teaching staff in school K is 30% more than that of school E and the ratio of the number of teaching staff in school C to school K is 5:6, then find the total number of (teaching + non-teaching)staff in school K.

a. 655

b. 450

c. 569

d. 722

e. 689

8. Questions

The average number of staff in schools C and F is (x + 60) and the number of teaching staff in school F is 20 more than that of school B and the number of non-teaching staff in school F is 60% less than that of school B. Find the value of x.

a. 230

b. 420

c. 380

d. 400

e. 260

9. Questions

The ratio of the total number of male to female staff in school B is 11:6 and the number of male teaching staff in school B is 20 more than the number of non-teaching staff in school D. Find the number of female non-teaching staff in school B.

a. 20

b. 90

c. 140

d. 50

e. 240

10. Questions

If the average number of non-teaching staff in schools A, B, D and E is (y + 27.5) and the total number of male staff in school E is (2y + 30), then find the total number of female staff in school E.

a. 110

b. 150

c. 170

d. 120

e. 180

11. Questions

Read the following information carefully and answer the questions.

Two types of clips (claw + Banana) are sold in four different shops namely P, Q, R and S. The number of

banana clips sold in shop R is 80% of the number of claw clips sold in shop P and the number of banana clips sold in shop P is 120% more than the number of claw clips sold in shop S. The number of claw clips sold in shop S is twice that of shop P and the number of banana clips sold in shop S is 50% more than the number of claw clips sold in shop S. The number of claw clips sold in shops R and P is 200 and 40 respectively. The number of claw clips sold in shop R is 20% less than the number of banana clips sold in shop Q and the total number of clips sold in shop Q is 300.

The number of snap clips sold in shop P is y and the number of snap clips sold in shop R is 300% more than the number of claw clips in shop R. If the number of snap clips sold in shop R is 20% less than that of shop P, then find the value of y.

a. 1200

b. 998

c. 768

d. 1000

e. 3220

12. Questions

The number of claw clips sold in shop Q is 1/6thof the number of claw clips sold in shop T and the ratio of the number of claw clips to banana clips sold in shop T is 15:11. Find the total number of (claw + banana) clips sold in shop T.

a. 480

b. 520

c. 420

d. 180

e. 350

13. Questions

The number of pin clips sold in shop R is equal to the difference between the number of banana clips sold in shops P and R and the number of pin clips sold in shop S is 36 more than that of shop R. Find the ratio of the number of pin clips sold in shop S to the number of banana clips sold in that shop.

a. 5:4

b. 3:2

c. 2:7

d. 8:5

e. 4:9

14. Questions

Find the ratio of the total number of (claw + banana) clips sold in shop R to the number of banana clips sold in shop P.

a. 11:10

b. 12:7

c. 19:17

d. 29:22

e. 31:12

15. Questions

If the number of banana clips sold to boys in shop Q is 50 less than the number of banana clips sold in shop S and the ratio of the number of claw clips sold to boys and girls in shop Q is 1:4, then find the total number of (claw + banana) clips sold to girls in shop Q.

a. 190

b. 200

c. 160

d. 220

e. 180

16. Questions

A man invested Rs. 2800 in scheme A at the rate of 12% per annum in simple interest for 4 years and obtained an interest of Rs.x. If he invested Rs.5x in scheme B at the rate of 25% per annum for 2 years in compound interest. Find the difference between the interest received in schemes A and B.

a. Rs. 2436

b. Rs. 1436

c. Rs. 2566

d. Rs. 1879

e. Rs. 988

17. Questions

Two vessels A and B contain mixtures of milk to water in the ratio 2:3 and 5:3 respectively. If 160 ml of mixture is taken out from vessel B and 80 ml of milk is added to vessel B, then the ratio of milk to water in vessel B becomes 23:9. If the ratio of the initial quantity of water in vessel A to vessel B is 9:5, then find the initial quantity of milk in vessel A.

a. 100 ml

b. 180 ml

c. 150 ml

d. 130 ml

e. 190 ml

18. Questions

A and B can complete the work in y days and 4y days respectively. C alone starts the work and after completing 40% of the work, C left. Then A and B together complete the remaining work. If the totalwages for the work is Rs. 5000, then find the wages obtained by B.

a. Rs. 1500

b. Rs. 600

c. Rs. 800

d. Rs. 2400

e. Rs. 2000

19. Questions

The area of the rectangle is 1080 cm^2 and the ratio of the length to the breadth of the rectangle is 6:5. If the radius of the cylinder is 1/3rdmore than the difference between the length and breadth of the rectangle and the height of the cylinder is 4 cm more than the unit digit of the length of the rectangle, then find the volume of the cylinder.

a. $550\pi\ cm^3$

b. $640\pi\ cm^3$

c. $720\pi\ cm^3$

d. $480\pi\ cm^3$

e. $455\pi\ cm^3$

20. Questions

A and B entered into a business by investing Rs. 11000 and Rs. 10000 respectively. At the end of the year,they distributed 20% of the total profit between them equally and the rest in proportion to their investment. If the profit received by A is Rs. 160 more than that of B, then find the total profit of the business.

a. Rs.3800

b. Rs.5600

c. Rs.4200

d. Rs.6300

e. Rs.2100

21. Questions

The cost of the article is first increased by 10% and then decreased by 20%. After marking the article Rs. 200 above, it is sold after giving a discount of Rs. 40. In this process, there is a loss of 4% on the original cost price. Find the original cost price of the article.

a. Rs. 1600

b. Rs. 2200

c. Rs. 2000

d. Rs. 1800

e. Rs. 3000

22. Questions

The average present age of A, B and C is 36 years. The present age of A is 25% more than that of B. If 24 years hence, the ratio of the age of A to C will be 16:15, then find the ratio of the present age of B to the age of A after 12 years.

a. 4:7

b. 5:11

c. 8:13

d. 3:10

e. 2:9

23. Questions

The length of the train is (x + 50) m and the train crosses a man running in opposite directionsat a speed of 10 m/s in 5 seconds. It also crosses another man, running in the same direction at a speed of 5 m/s in 10 seconds. Find the value of x.

a. 120

b. 20

c. 100

d. 80

e. 45

24. Questions

The average weight of a certain number of students in a class is 52.5 kg and the average weight of the boys in the class is 48 kg. If the ratio of the number of boys to girls in the class is 5:3, then find

the average weight of girls in the class.

a. 55 kg

b. 42.8 kg

c. 60 kg

d. 62.9 kg

e. 46 kg

25. Questions

The time taken by the boat to travel (160 + x) km downstream is 1 hour less than the time taken by the boat to travel 132 km upstream. If the speed of the stream is 10 km/hr and the downstream speed of the boat is 32 km/hr, then find the time taken by the boat to cover (x + 60) km in still water.

a. 20 hours

b. 11 hours

c. 24 hours

d. 10 hours

e. 15 hours

26. Questions

What value should come in the place of (?) in the following questions?

(223 + 427) ÷ ? + 34 – 59 = 8 *30 ÷ 6

a. 10

b. 15

c. 40

d. 25

e. 38

27. Questions

$96 * 45 - 52 * 22 = 19^2 + ? * 5$

a. 619

b. 563

c. 719

d. 480

e. 370

28. Questions

125% of ? + 45*8 = 14^2 + 345 + √16

a. 122

b. 345

c. 234

d. 148

e. 216

29. Questions

$(2\frac{1}{6} + 3\frac{3}{4} + 1\frac{2}{3}) * 36 = 9^{1/2} * ?$

a. 65

b. 82

c. 91

d. 88

e. 70

30. Questions

(?% of 500) ÷ 13 = 376 – 3^2 – 144 ÷ 12

a. 735

b. 947

c. 542

d. 923

e. 820

31. Questions

What value should come in the place of (?) in the following number series?

9, 30, 72, ?, 219, 324

a. 129

b. 158

c. 147

d. 135

e. 161

32. Questions

260, 293, 328, 365, ?, 445

a. 398

b. 404

c. 512

d. 530

e. 541

33. Questions

234, ?, 258, 198, 282, 174

a. 222

b. 212

c. 244

d. 198

e. 210

34. Questions

15, 9.5, 11.5, 25, ?, 818

a. 130

b. 174

c. 156

d. 102

e. 181

35. Questions

36, 9, 72, 18, ?, 36

a. 144

b. 180

c. 90

d. 114

e. 108

36. Questions

Following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give answer as,

i). $2x^2 – 5x - 12 = 0$

ii). $y^2 + 29y + 168 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

37. Questions

i). $2x^2 + 12x + 16 = 0$

ii). $2y^2 - 7y – 22 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

38. Questions

i). $11x^2 – 121 = 0$

ii). $y^2 – 19y + 84 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

39. Questions

i). $x^2 - 6x - 187 = 0$

ii). $y^2 - 35y + 306 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

40. Questions

i). $x^2 + 11x + 18 = 0$

ii). $y^2 + 16y + 28 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

Explanations:

1. Questions

On Monday:

The total number of masks distributed = 1600

The number of surgical masks distributed = 1600 * 40/100 = 640

The number of barrier masks distributed = 1600 * 60/100 = 960

On Tuesday:

The total number of masks distributed = 1250

The number of surgical masks distributed = 1250 * 60/100 = 750

The number of barrier masks distributed = 1250 * 40/100 = 500

On Wednesday:

The total number of masks distributed = 1450

The number of surgical masks distributed = 1450 * 30/100 = 435

The number of barrier masks distributed = 1450 * 70/100 = 1015

On Thursday:

The total number of masks distributed = 1800

The number of surgical masks distributed = 1800 * 75/100 = 1350

The number of barrier masks distributed = 1800 * 25/100 = 450

On Friday:

The total number of masks distributed = 1180

The number of surgical masks distributed = 1180 * 20/100 = 236

The number of barrier masks distributed = 1180 * 80/100 = 944

Days	The total number of masks distributed	The number of surgical masks distributed	The number of barrier masks distributed
Monday	1600	640	960
Tuesday	1250	750	500
Wednesday	1450	435	1015
Thursday	1800	1350	450
Friday	1180	236	944

Answer: B

According to the question,

The total number of masks distributed on Saturday = 1250 * 112/100 = 1400

The number of surgical masks distributed on Saturday = 640 * 105/100 = 672

The number of barrier masks distributed on Saturday = 1400 – 672 = 728

The ratio of the number of barrier masks distributed on Tuesday to Saturday = 500:728 = 125:182

125/y = 125/182

y = 182

2. Questions

On Monday:

The total number of masks distributed = 1600

The number of surgical masks distributed = 1600 * 40/100 = 640

The number of barrier masks distributed = 1600 * 60/100 = 960

On Tuesday:

The total number of masks distributed = 1250

The number of surgical masks distributed = 1250 * 60/100 = 750

The number of barrier masks distributed = 1250 * 40/100 = 500

On Wednesday:

The total number of masks distributed = 1450

The number of surgical masks distributed = 1450 * 30/100 = 435

The number of barrier masks distributed = 1450 * 70/100 = 1015

On Thursday:

The total number of masks distributed = 1800

The number of surgical masks distributed = 1800 * 75/100 = 1350

The number of barrier masks distributed = 1800 * 25/100 = 450

On Friday:

The total number of masks distributed = 1180

The number of surgical masks distributed = 1180 * 20/100 = 236

The number of barrier masks distributed = 1180 * 80/100 = 944

Days	The total number of masks distributed	The number of surgical masks distributed	The number of barrier masks distributed
Monday	1600	640	960
Tuesday	1250	750	500
Wednesday	1450	435	1015
Thursday	1800	1350	450
Friday	1180	236	944

Answer: E

The number of barrier masks distributed on Tuesday = 500

After decreased,

The number of barrier masks distributed on Tuesday = 500 * 82/100 = 410

Required difference = 944 – 410 = 534

3. Questions

On Monday:

The total number of masks distributed = 1600

The number of surgical masks distributed = 1600 * 40/100 = 640

The number of barrier masks distributed = 1600 * 60/100 = 960

On Tuesday:

The total number of masks distributed = 1250

The number of surgical masks distributed = 1250 * 60/100 = 750

The number of barrier masks distributed = 1250 * 40/100 = 500

On Wednesday:

The total number of masks distributed = 1450

The number of surgical masks distributed = 1450 * 30/100 = 435

The number of barrier masks distributed = 1450 * 70/100 = 1015

On Thursday:

The total number of masks distributed = 1800

The number of surgical masks distributed = 1800 * 75/100 = 1350

The number of barrier masks distributed = 1800 * 25/100 = 450

On Friday:

The total number of masks distributed = 1180

The number of surgical masks distributed = 1180 * 20/100 = 236

The number of barrier masks distributed = 1180 * 80/100 = 944

Days	The total number of masks distributed	The number of surgical masks distributed	The number of barrier masks distributed
Monday	1600	640	960
Tuesday	1250	750	500
Wednesday	1450	435	1015
Thursday	1800	1350	450
Friday	1180	236	944

Answer: A

The ratio of the number of surgical to barrier masks distributed to males on Thursday = 5:0.5 = 10:1

Let the number of surgical and barrier masks distributed to males on Thursday be 10x and 1x respectively.

Let the number of surgical and barrier masks distributed to females on Thursday be y each.

10x + y = 1350 --->(1)

1x + y =450 --->(2)

From equations (1) and (2),

x = 100 and y = 350

The number of surgical masks distributed to males on Thursday = 10 * 100 = 1000

4. Questions

On Monday:

The total number of masks distributed = 1600

The number of surgical masks distributed = 1600 * 40/100 = 640

The number of barrier masks distributed = 1600 * 60/100 = 960

On Tuesday:

The total number of masks distributed = 1250

The number of surgical masks distributed = 1250 * 60/100 = 750

The number of barrier masks distributed = 1250 * 40/100 = 500

On Wednesday:

The total number of masks distributed = 1450

The number of surgical masks distributed = 1450 * 30/100 = 435

The number of barrier masks distributed = 1450 * 70/100 = 1015

On Thursday:

The total number of masks distributed = 1800

The number of surgical masks distributed = 1800 * 75/100 = 1350

The number of barrier masks distributed = 1800 * 25/100 = 450

On Friday:

The total number of masks distributed = 1180

The number of surgical masks distributed = 1180 * 20/100 = 236

The number of barrier masks distributed = 1180 * 80/100 = 944

Days	The total number of masks distributed	The number of surgical masks distributed	The number of barrier masks distributed
Monday	1600	640	960
Tuesday	1250	750	500
Wednesday	1450	435	1015
Thursday	1800	1350	450
Friday	1180	236	944

Answer: C

The number of N95 masks distributed on Wednesday = 435 * 7/5 = 609

The number of face masks distributed on Wednesday = 435 * 9/5 = 783

The number of N95 masks distributed on Friday = 609 + 10 = 619

The number of face masks distributed on Friday = 783 + 16 = 799

Required difference = 799 – 619 = 180

5. Questions

On Monday:

The total number of masks distributed = 1600

The number of surgical masks distributed = 1600 * 40/100 = 640

The number of barrier masks distributed = 1600 * 60/100 = 960

On Tuesday:

The total number of masks distributed = 1250

The number of surgical masks distributed = 1250 * 60/100 = 750

The number of barrier masks distributed = 1250 * 40/100 = 500

On Wednesday:

The total number of masks distributed = 1450

The number of surgical masks distributed = 1450 * 30/100 = 435

The number of barrier masks distributed = 1450 * 70/100 = 1015

On Thursday:

The total number of masks distributed = 1800

The number of surgical masks distributed = 1800 * 75/100 = 1350

The number of barrier masks distributed = 1800 * 25/100 = 450

On Friday:

The total number of masks distributed = 1180

The number of surgical masks distributed = 1180 * 20/100 = 236

The number of barrier masks distributed = 1180 * 80/100 = 944

Days	The total number of masks distributed	The number of surgical masks distributed	The number of barrier masks distributed
Monday	1600	640	960
Tuesday	1250	750	500
Wednesday	1450	435	1015
Thursday	1800	1350	450
Friday	1180	236	944

Answer: C

Required percentage = (960 – 750)/750 * 100 = 210/750 * 100 = 28%

6. Questions

The total number of staff in school A = 220 * 2 = 440

Teaching + Non-teaching = 440 --->(1)

Teaching – Non-teaching = 40 --->(2)

By solving equation (1) and (2), we get

The number of teaching staff in school A = (440 + 40)/2 = 240

The number of non-teaching staff in school A = 440 – 240 = 200

Similarly, we get

School	The total number of staff	The number of teaching staff	The number of non-teaching staff
A	440	240	200
B	680	380	300
C	400	225	175
D	340	200	140
E	560	330	230

Answer: B

According to the equation,

The number of teaching staff in school A = 240

The number of teaching staff in school D = 200

Let the number of teaching staff P and Qin school A be2x and x respectively.

Let the number of teaching staff P and Q in school D be2y and 3y respectively.

2x + x = 240

x = 80

2y + 3y = 200

y = 40

The number of teaching staff P in school A = 2 * 80 = 160

The number of teaching staff Q in school D = 3 * 40 = 120

Required difference = (160 – 120) = 40

7. Questions

The total number of staff in school A = 220 * 2 = 440

Teaching + Non-teaching = 440 --->(1)

Teaching – Non-teaching = 40 --->(2)

By solving equation (1) and (2), we get

The number of teaching staff in school A = (440 + 40)/2 = 240

The number of non-teaching staff in school A = 440 – 240 = 200

Similarly, we get

School	The total number of staff	The number of teaching staff	The number of non-teaching staff
A	440	240	200
B	680	380	300
C	400	225	175
D	340	200	140
E	560	330	230

Answer: C

The number of non-teaching staff in school K = 230 * 130/100 = 299

The number of teaching staff in school K = 225 * 6/5 = 270

The total number of staff in school K = 299 + 270 = 569

8. Questions

The total number of staff in school A = 220 * 2 = 440

Teaching + Non-teaching = 440 --->(1)

Teaching – Non-teaching = 40 --->(2)

By solving equation (1) and (2), we get

The number of teaching staff in school A = (440 + 40)/2 = 240

The number of non-teaching staff in school A = 440 – 240 = 200

Similarly, we get

School	The total number of staff	The number of teaching staff	The number of non-teaching staff
A	440	240	200
B	680	380	300
C	400	225	175
D	340	200	140
E	560	330	230

Answer: D

The number of teaching staff in school F = (380 + 20) = 400

The number of non-teaching staff in school F = 300 * 40/100 = 120

The total number of staff in school F = (400 + 120) = 520

The average number of staff in schools F and C = (520 + 400)/2 = 920/2 = 460

(x + 60) = 460

x = 400

9. Questions

The total number of staff in school A = 220 * 2 = 440

Teaching + Non-teaching = 440 --->(1)

Teaching – Non-teaching = 40 --->(2)

By solving equation (1) and (2), we get

The number of teaching staff in school A = (440 + 40)/2 = 240

The number of non-teaching staff in school A = 440 – 240 = 200

Similarly, we get

School	The total number of staff	The number of teaching staff	The number of non-teaching staff
A	440	240	200
B	680	380	300
C	400	225	175
D	340	200	140
E	560	330	230

Answer: A

The total number of staff in school B = 680

The number of male staff in school B = 680 * 11/17 = 440

The number of male teaching staff in school B = 140 + 20 = 160

The number of male non-teaching staff in school B = 440 – 160 = 280

The number of female non-teaching staff in school B = 300 – 280 = 20

10. Questions

The total number of staff in school A = 220 * 2 = 440

Teaching + Non-teaching = 440 --->(1)

Teaching – Non-teaching = 40 --->(2)

By solving equation (1) and (2), we get

The number of teaching staff in school A = (440 + 40)/2 = 240

The number of non-teaching staff in school A = 440 – 240 = 200

Similarly, we get

School	The total number of staff	The number of teaching staff	The number of non-teaching staff
A	440	240	200
B	680	380	300
C	400	225	175
D	340	200	140
E	560	330	230

Answer: B

The average number of non-teaching staff in schools A, B, D and E = (200 + 300 +140 + 230)/4 = 870/4 = 217.5

y + 27.5 = 217.5

y = 190

The total number of male staff in school E = 2 * 190 + 30 = 410

The total number of female staff in school E = 560 – 410 = 150

11. Questions

The number of claw clips sold in shop R = 200

The number of claw clips sold in shop P = 40

The number of banana clips sold in shop R = 40 * 80/100 = 32

The total number of clips sold in shop R = 200 + 32 = 232

The number of claw clips sold in shop S = 40 * 2 = 80

The number of banana clips sold in shop P = 80 * 220/100 = 176

The total number of clips sold in shop P = 40 + 176 = 216

The number of banana clips sold in shop S = 80 * 150/100 = 120

The total number of clips sold in shop S = 80 + 120 = 200

The number of banana clips sold in shop Q = 200 * 100/80 = 250

The number of claw clips sold in shop Q = 300 – 250 = 50

Shop	The total number of clips sold	The number of claw clips sold	The number of banana clips sold
P	216	40	176
Q	300	50	250
R	232	200	32
S	200	80	120

Answer: D

The number of snap clips sold in shop R = 200 * 400/100 = 800

800 = y * 80/100

y = 1000

12. Questions

The number of claw clips sold in shop R = 200

The number of claw clips sold in shop P = 40

The number of banana clips sold in shop R = 40 * 80/100 = 32

The total number of clips sold in shop R = 200 + 32 = 232

The number of claw clips sold in shop S = 40 * 2 = 80

The number of banana clips sold in shop P = 80 * 220/100 = 176

The total number of clips sold in shop P = 40 + 176 = 216

The number of banana clips sold in shop S = 80 * 150/100 = 120

The total number of clips sold in shop S = 80 + 120 = 200

The number of banana clips sold in shop Q = 200 * 100/80 = 250

The number of claw clips sold in shop Q = 300 – 250 = 50

Shop	The total number of clips sold	The number of claw clips sold	The number of banana clips sold
P	216	40	176
Q	300	50	250
R	232	200	32
S	200	80	120

Answer: B

The number of claw clips sold in shop Q = 50

The number of claw clips sold in shop T = 50 * 6/1 = 300

The number of banana clips sold in shop T = 300 * 11/15 = 220

The total number of clips sold in shop T = (220 + 300) = 520

13. Questions

The number of claw clips sold in shop R = 200

The number of claw clips sold in shop P = 40

The number of banana clips sold in shop R = 40 * 80/100 = 32

The total number of clips sold in shop R = 200 + 32 = 232

The number of claw clips sold in shop S = 40 * 2 = 80

The number of banana clips sold in shop P = 80 * 220/100 = 176

The total number of clips sold in shop P = 40 + 176 = 216

The number of banana clips sold in shop S = 80 * 150/100 = 120

The total number of clips sold in shop S = 80 + 120 = 200

The number of banana clips sold in shop Q = 200 * 100/80 = 250

The number of claw clips sold in shop Q = 300 – 250 = 50

Shop	The total number of clips sold	The number of claw clips sold	The number of banana clips sold
P	216	40	176
Q	300	50	250
R	232	200	32
S	200	80	120

Answer: B

The number of pin clips sold in shop R = (176 – 32) = 144

The number of pin clips sold in shop S = 144 + 36 = 180

Required ratio = 180:120 = 3:2

14. Questions

The number of claw clips sold in shop R = 200

The number of claw clips sold in shop P = 40

The number of banana clips sold in shop R = 40 * 80/100 = 32

The total number of clips sold in shop R = 200 + 32 = 232

The number of claw clips sold in shop S = 40 * 2 = 80

The number of banana clips sold in shop P = 80 * 220/100 = 176

The total number of clips sold in shop P = 40 + 176 = 216

The number of banana clips sold in shop S = 80 * 150/100 = 120

The total number of clips sold in shop S = 80 + 120 = 200

The number of banana clips sold in shop Q = 200 * 100/80 = 250

The number of claw clips sold in shop Q = 300 – 250 = 50

Shop	The total number of clips sold	The number of claw clips sold	The number of banana clips sold
P	216	40	176
Q	300	50	250
R	232	200	32
S	200	80	120

Answer: D

The total number of clips sold in shop R = 200 + 32 = 232

The number of banana clips sold in shop P = 176

Required ratio = 232:176 = 29:22

15. Questions

The number of claw clips sold in shop R = 200

The number of claw clips sold in shop P = 40

The number of banana clips sold in shop R = 40 * 80/100 = 32

The total number of clips sold in shop R = 200 + 32 = 232

The number of claw clips sold in shop S = 40 * 2 = 80

The number of banana clips sold in shop P = 80 * 220/100 = 176

The total number of clips sold in shop P = 40 + 176 = 216

The number of banana clips sold in shop S = 80 * 150/100 = 120

The total number of clips sold in shop S = 80 + 120 = 200

The number of banana clips sold in shop Q = 200 * 100/80 = 250

The number of claw clips sold in shop Q = 300 – 250 = 50

Shop	The total number of clips sold	The number of claw clips sold	The number of banana clips sold
P	216	40	176
Q	300	50	250
R	232	200	32
S	200	80	120

Answer: D

The number of banana clips sold to boys in shop Q = 120 – 50 = 70

The number of banana clips sold to girls in shop Q = 250 – 70 = 180

The number of claw clips sold to girls in shop Q = 50 * 4/5 = 40

The total number of clips sold to girls in shop Q = 40 + 180 = 220

16. Questions

Answer: A

For scheme A,

SI = PNR/100

SI = 2800 * 12 * 4/100

SI= Rs.1344

For scheme B,

The amount invested in scheme B = 1344 * 5 = Rs. 6720

$CI = P (1+R/100)^n – P$

CI= 6720 * (1 + 25/100) – 6720

CI = 6720 * 1.25 * 1.25 - 6720

CI = Rs.3780

Required difference = (3780 – 1344) = Rs. 2436

17. Questions

Answer: B

Let the initial quantity of milk and water in vessel B be 5x ml and 3x ml respectively.

If 160 ml of mixture is taken out from vessel B,

The quantity of milk taken out from vessel B = 160 * 5/8 = 100 ml

The quantity of water taken out from vessel B = 160 * 3/8 = 60 ml

(5x – 100 + 80)/(3x – 60) = 23/9

(5x – 20)/(3x – 60) = 23/9

45x – 180 = 69x – 1380

24x = 1200

x = 50

The initial quantity of water in vessel B = 3 * 50 = 150 ml

The initial quantity of water in vessel A = 150 * 9/5 = 270 ml

The initial quantity of milk in vessel A = 270/3 * 2 = 180 ml

18. Questions

Answer: B

The time taken by A and B alone to complete the work is y and 4y days respectively.

The efficiency of A to B = (1/y) : (1/4y) = 4:1

40% of the work is done by C,

So, the wages obtained by C = 5000 * 40/100 = Rs. 2000

Remaining amount = (5000 – 2000) = Rs. 3000

The wages obtained by B = 3000 * 1/5 = Rs. 600

19. Questions

Answer: B

Let the length of the rectangle be 6xcm.

The breadth of the rectangle = 5xcm

6x * 5x = 1080

$30x^2 = 1080$

$x^2 = 36 = 6^2$

x = 6

The breadth of the rectangle = 5 * 6 = 30 cm

The length of the rectangle = 6 * 6 = 36 cm

The radius of the cylinder = (36 – 30) * (3 + 1)/3 = 6 * 4/3 = 8 cm

The height of the cylinder = 6 + 4 = 10 cm

The volume of the cylinder = $\pi r^2 h$ cm^3 = $\pi * 8 * 8 * 10 = 640\pi$ cm^3

20. Questions

Answer: C

Let the total profit received by them be Rs.5x.

The total amount distributed equally to them = 5x * 20/100 = Rs.x

The ratio of amount received by A to B = (11000 * 12) : (10000 * 12) = 11: 10

[(11/21) * 4x + x/2] – [(10/21) * 4x + x/2] = 160

44x/21 + x/2 – 40x/21 – x/2 = 160

44x – 40x = 160 * 21

4x = 160 * 21

x = 840

The total profit of the business = 5 * 840 = Rs.4200

21. Questions

Answer: C

According to the question,

Let the original cost price of the article be 100x.

The cost price after increasing and decreasing,

CP = 100x * 110/100 * 80/100 = Rs.88x

The marked price of the article= Rs.(88x + 200)

100x * 96/100 = (88x + 200) – 40

96x – 88x = 160

8x = 160

x = 20

The original cost price of the article = 100 * 20 = Rs. 2000

22. Questions

Answer: C

Let the ages of A and C after 24 years be 16x years and 15x years respectively.

The present age of C = (15x – 24) years

The present age of A = (16x – 24) years

The present age of B = (16x – 24) * 100/125 = (12.8x – 19.2) years

12.8x – 19.2 + 15x – 24 + 16x – 24 = 108

43.8x = 175.2

x = 4

The present age of A = 16 * 4 – 24 = 64 - 24 = 40 years

The present age of B = 40 * 100/125 = 32 years

Required ratio = 32: (40 + 12) = 32:52 = 8:13

23. Questions

Answer: C

Let the speed of the train A = s m/s

The speed of the man = 10 m/s

(x + 50) = (s + 10) * 5 ---(1)

The speed of the another man = 5 m/s

(x + 50) = (s – 5) * 10 ---(2)

From equations (1) and (2),

(s + 10) * 5 = (s – 5) * 10

5s + 50 = 10s - 50

s = 100/5 = 20

The length of the train = (20 + 10) * 5 = 30 * 5 = 150 m

x + 50 = 150

x = 100

24. Questions

Answer: C

Let the number of boys in the class be 5x.

The number of girls in the class = 3x

Let the average weight of girls in the class = y kg

52.5 * (5x + 3x) = (48 * 5x) + y * 3x

420x = 240x + 3xy

180x = 3xy

180 = 3y

y = 60 kg

25. Questions

Answer: D

According to the question,

The speed of the stream = 10 km/hr

The downstream speed = 32 km/hr

The speed of the boat in still water= 32 – 10 =22 km/hr

The upstream speed of the boat = 22 – 10 = 12 km/hr

132/12 - (x + 160)/32 = 1

11 – (x + 160)/32 = 1

(x +160)/32 = 10

(x + 160) = 320

x = 160

Required time = (160 + 60)/22 = 220/22 = 10 hours

26. Questions

Answer: A

(223 + 427) ÷ ? + 34 – 59 = 8 * 30 ÷ 6

650/? – 25 = 8 * 5

650/? = 40 + 25

650/? = 65

? = 10

27. Questions

Answer: B

$96 * 45 - 52 * 22 = 19^2 + ? * 5$

$4320 - 1144 = 361 + ? * 5$

$3176 - 361 = ? * 5$

$? = 2815/5$

$? = 563$

28. Questions

Answer: D

125% of ? + 45 * 8 = 14^2 + 345 + √16

125/100 * ? + 360 = 196 + 345 + 4

5/4 * ?= 545 - 360

? = 185 * 4/5

? = 148

29. Questions

Answer: C

$(2\frac{1}{6} + 3\frac{3}{4} + 1\frac{2}{3}) * 36 = 9^{1/2} * ?$

(13/6 + 15/4 + 5/3) * 36 = 3 *?

(26 + 45 + 20)/12 * 36 = 3 *?

? = 91 * 3/3

?= 91

30. Questions

Answer: D

(?% of 500) ÷ 13 = 376 – 32 – 144 ÷ 12

(?/100 * 500)/13 = 376 - 9 - 12

5 * ?/13 = 355

? = 923

31. Questions

Answer: D

9 + 21 = 30

30 + 42 = 72

72 + 63 = **135**

135 + 84 = 219

219 + 105 = 324

32. Questions

Answer: B

16^2 + 4 = 260

17^2 + 4 = 293

18^2 + 4 = 328

19^2 + 4 = 365

20^2 + 4 = **404**

21^2 + 4 = 445

33. Questions

Answer: A

234 – 12 = **222**

222 + 36 = 258

258 – 60 = 198

198 + 84 = 282

282 – 108 = 174

34. Questions

Answer: D

15 * 0.5 + 2 = 9.5

9.5 * 1 + 2 = 11.5

11.5 * 2 + 2 = 25

25 * 4 + 2 = **102**

102 * 8 + 2 = 818

35. Questions

Answer: A

36/4 = 9

9 * 8 = 72

72/4 = 18

18 * 8 **= 144**

144/4 = 36

36. Questions

Answer: A

i). $2x^2 - 5x - 12 = 0$

$2x^2 - 8x + 3x - 12 = 0$

$2x(x - 4) + 3(x - 4) = 0$

$(x - 4)(2x + 3) = 0$

$x = +4, -1.5$

ii). $y^2 + 29y + 168 = 0$

$y^2 + 21y + 8y + 168 = 0$

$y(y + 21) + 8(y + 21) = 0$

$(y + 21)(y + 8) = 0$

$y = -21, -8$

Hence, $x > y$

37. Questions

Answer: E

i). $2x^2 + 12x + 16 = 0$

$x^2 + 6x + 8 = 0$

$x^2 + 4x + 2x + 8 = 0$

$x(x + 4) + 2(x + 4) = 0$

$x = -4, -2$

ii). $2y^2 - 7y - 22 = 0$

$2y^2 + 4y - 11y - 22 = 0$

$2y(y + 2) - 11(y + 2) = 0$

$(2y - 11)(y + 2) = 0$

$y = +5.5. -2$

Hence, $x \leq y$

38. Questions

Answer: D

i). $11x^2 - 121 = 0$

$11x^2 = 121$

$x^2 = 11$

$x = \sqrt{11}$

ii). $y^2 - 19y + 84 = 0$

$y^2 - 12y - 7y + 84 = 0$

$y(y - 12) - 7(y - 12) = 0$

$(y - 12)(y - 7) = 0$

$y = +12, +7$

Hence, $x < y$

39. Questions

Answer: E

i). $x^2 - 6x - 187 = 0$

$x^2 - 17x + 11x - 187 = 0$

$x(x - 17) + 11(x - 17) = 0$

$(x-17)(x+11) = 0$

$x = +17, -11$

ii). $y^2 - 35y + 306 = 0$

$y^2 - 17y - 18y + 306 = 0$

$y(y - 17) - 18(y - 17) = 0$

$(y - 17)(y - 18) = 0$

$y = +17, +18$

Hence, $x \leq y$

40. Questions

Answer: C

i). $x^2 + 11x + 18 = 0$

$x^2 + 9x + 2x + 18 = 0$

$x(x + 9) + 2(x + 9) = 0$

$(x + 9)(x + 2) = 0$

$x = -9, -2$

ii). $y^2 + 16y + 28 = 0$

$y^2 + 14y + 2y + 28 = 0$

$y(y + 14) + 2(y + 14) = 0$

$(y + 14)(y + 2) = 0$

$y = -14, -2$

Hence, $x = y$ or the relationship can't be determined.