1. Questions

Study the following information carefully and answer the questions.

The given table shows the total number of pencils sold (coloured + carbon) and the percentage of the number of coloured pencils sold in five different shops namely A, B, C, D and E respectively.

Shop	The total number of pencils sold	Percentage of number of coloured pencils sold
A	(x+400)	(x/5)%
B	(2x +250)	50%
C	4x	60%
D	800	70%
E	400	(x-70)%

Note: The number of carbon pencils sold in shop D is equal to the number of coloured pencils sold in shop C.

The ratio of the total number of pencils sold in shop D to F is 2:3. The number of coloured pencils sold in shop F is 400 more than that in shop B. Find the number of carbon pencils sold in Shop F.

a. 575

b. 525

c. 625

d. 450

e. 560

2. Questions

In shop C, 20% and 15% of coloured pencils are red and black respectively, and the rest are blue. The number of blue pencils sold in shop D is 150 more than that in shop C. Find the total number of red and black coloured pencils sold in shops C and D.

a. 349

b. 338

c. 258

d. 250

e. 340

3. Questions

The number of woodless pencils sold in Shop E is 15% more than that of carbon pencils. The number of woodless pencils sold in shops A and E is 450. Find the number of woodless pencils sold

in shop A.

a. 328

b. 230

c. 128

d. 160

e. 278

4. Questions

Find the average number of carbon pencils sold in all shops together.

a. 271

b. 161

c. 261

d. 341

e. 250

5. Questions

The total number of pencils sold in shop B is what percentage more or less than the number of carbon pencils sold in shop A.

a. 13% less

b. 12.5% more

c. 18% less

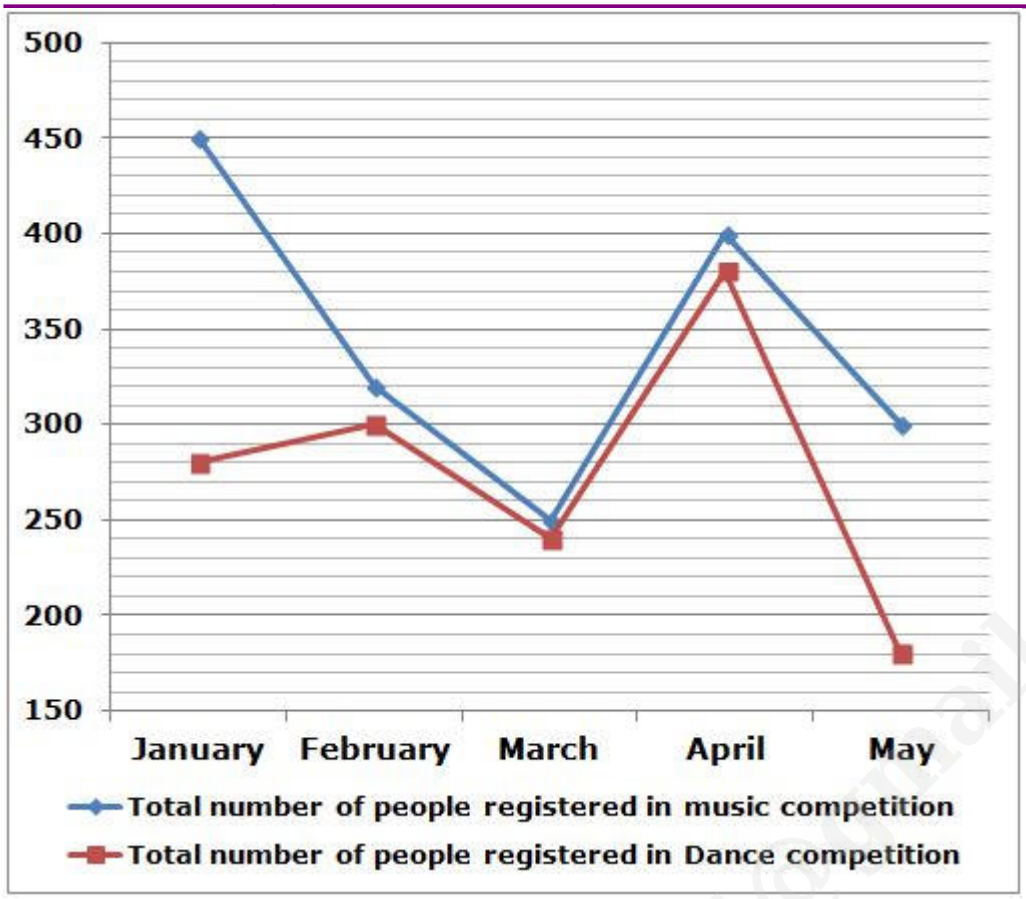
d. 15% more

e. 22.8% more

6. Questions

Study the following information carefully and answer the questions.

The given line graph shows the total number of people registered in the music competition and the total number of people registered in the dance competition in five different months namely January, February, March, April and May respectively.



Note: The total number of people registered = The number of people registered in Dance + The number of people registered in music.

The number of people registered for the singing competition in April was 8% more than the number of people registered for the music competition in April. Find the total number of people registered for the singing, music, and dance competition in April.

a. 1212

b. 1324

c. 1700

d. 1414

e. 1560

7. Questions

The number of people registered for the music completion in June is 200 more than that of March, and the total number of people registered in June is 750. Find out the number of people registered for the dance competition in June.

a. 280

b. 300

c. 350

d. 210

e. 400

8. Questions

Find the total number of people registered for the music competition in all months together.

a. 1690

b. 1720

c. 1450

d. 1300

e. 1290

9. Questions

Find the ratio between the number of people registered for the music competition in March to the number of people registered for the dance competition in May.

a. 18:25

b. 17:11

c. 15:17

d. 25:18

e. 10:17

10. Questions

Find the difference between the number of people registered for dance competition in February and March.

a. 80

b. 60

c. 40

d. 50

e. 20

11. Questions

Study the following information carefully and answer the questions.

Some males and females watched different types of movies namely A, B, C and D respectively. The total number of people who watched movies B and C is 70 and 120 respectively. The number of females who watched movie A is 20 more than that of B and the ratio of the number of male to female who watched movie A is 9:14. The number of male who watched movie D is 10 less than that of A. The ratio of the number of males who watched movies B and C is 1:4 and females who watched movies B and C is 5:4. The number of females who watched movie D is half that of B.

The number of males who watched movies D and E is 60, and the ratio of females who watched movies E and A is 6:7. Find the total number of people who watched the movie E.

a. 70

b. 85

c. 45

d. 30

e. 90

12. Questions

40% of males who watch movie B are school students, and the rest of them are college students. The number of female school students who watch movie B is 10 more than that of males. Find the total number of college students who watch Movie B.

a. 44

b. 20

c. 46

d. 27

e. 49

13. Questions

Find the ratio of the total number of people watch movies A to D.

a. 12:23

b. 11:17

c. 23:12

d. 19:21

e. 17:19

14. Questions

Find the total number of males who watch all the movies together.

a. 175

b. 180

c. 150

d. 120

e. 200

15. Questions

The total number of females watch movie B is what percentage of the number of males watch movie B.

a. 125%

b. 250%

c. 200%

d. 190%

e. 155%

16. Questions

A alone can complete the work in 24 days, while A and B together can complete the same work in 15 days. If B and C together can complete the given work in 16 days, then find the ratio between the efficiency of A and C.

a. 15:11

b. 7:9

c. 10:9

d. 5:7

e. 6:7

17. Questions

A mixture of milk and water contains 40% milk in it. 10% of the mixture is replaced with 30 litres of milk, and the final quantity of milk and water becomes 25:36. Find the initial quantity of water in the mixture.

a. 1200 litres

b. 800 litres

c. 1250 litres

d. 760 litres

e. 1290 litres

18. Questions

The speed of a boat in still water is 15 km/hr, and the speed of the stream is 5 km/hr. If the total time taken to cover X km downstream and 2x km upstream is 50 hours, then find the value of x.

a. 200

b. 250

c. 170

d. 240

e. 320

19. Questions

The cost price of the clock is Rs. 1000 and is sold after allowing a discount of 10% and sold for Rs. 720. The cost of the pen is 20% less than that of the clock and is sold for the same price as the marked price of the clock. Find the profit or loss while selling the pen.

a. Rs. 10

b. Rs. 90

c. Rs. 60

d. Rs. 120

e. No profit/loss

20. Questions

The average age of A and B is 24 years. The average age of A, B, C, and D is 30 years. The ratio of age between C and D is 7:5, and the ratio between C and A is 3:2. Find the average age of A and D.

a. 28 years

b. 14 years

c. 29 years

d. 22 years

e. 19 years

21. Questions

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

15 % of 480 + 80 % of 320 + 20 % of 60 = ?

a. 320

b. 340

c. 360

d. 380

e. 400

22. Questions

√576 * ? + 248 ÷ 31 = 112 * √64

a. 31

b. 33

c. 35

d. 37

e. 39

23. Questions

36 * 7 + ? % of 348 = 43 * √324

a. 120

b. 130

c. 140

d. 150

e. 110

24. Questions

√529 * 4 + 45 % of 80 – 19 * 5 = ?

a. 33

b. 37

c. 45

d. 41

e. 29

25. Questions

75 % of 200 + √4225 % of 40 + ? = 90 % of 240

a. 20

b. 30

c. 40

d. 50

e. 60

26. Questions

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

2.003 + 5.006 – 12.9998 + 30.979 – 10.005 = ?

a. 10

b. 09

c. 11

d. 12

e. 15

27. Questions

25.03% of 247.91 – 15.18% of 140.05 = ?

a. 41

b. 35

c. 31

d. 46

e. 50

28. Questions

(82.01 * √50) ÷ ? = 287.08

a. 0.5

b. 1

c. 1.5

d. 2

e. 2.5

29. Questions

5999.58 ÷ 60.005 × 85.232 = ? × 24.96

a. 340

b. 360

c. 400

d. 300

e. 280

30. Questions

$\frac{2}{3} x \frac{6}{8} x \frac{2}{3} x \frac{3}{5} x\ 134 = ?$

a. 22

b. 34

c. 24

d. 25

e. 27

31. Questions

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

10, 12, 16, 24, 40, ?

a. 52

b. 76

c. 84

d. 60

e. 72

32. Questions

6, 10, 12, 12, 10, ?

a. 12

b. 16

c. 10

d. 6

e. 8

33. Questions

120, 109, ?, 54, 10, -45

a. 100

b. 93

c. 87

d. 71

e. 61

34. Questions

63, ?,256, 515, 1034, 2073

a. 127

b. 135

c. 149

d. 189

e. 190

35. Questions

30, 150, 675, ?, 9450, 28350

a. 2700

b. 2780

c. 2695

d. 2768

e. 2586

36. Questions

Find out the wrong number in the following number series.

75, 125, 170, 210, 245, 295

a. 245

b. 170

c. 210

d. 125

e. 295

37. Questions

6, 15, 31, 56, 92, 140

a. 140

b. 92

c. 56

d. 31

e. 15

38. Questions

216, 215, 206, 81, 32, 16

a. 16

b. 215

c. 81

d. 206

e. 32

39. Questions

29, 40, 44, 52, 62, 73

a. 73

b. 44

c. 62

d. 40

e. 52

40. Questions

19, 163, 359, 616, 939, 1339

a. 616

b. 163

c. 1339

d. 359

e. 939

41. Questions

In the following questions, two equations I and II are given. You have to solve both the equations and give an Answer as,

I). $2x^2 + 9x + 10 = 0$

II). $6y^2 + 17y + 12 = 0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x \leq y$

e. $x = y$ or the relation cannot be established

42. Questions

I). $x^2 - 11x + 30 = 0$

II). $y^2 - 8y + 15 = 0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x \leq y$

e. $x = y$ or the relation cannot be established

43. Questions

I). $x+4y = 12$

II). $y= \sqrt{4}$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x \leq y$

e. $x = y$ or the relation cannot be established

44. Questions

I). $2x^2 - 2x - 84=0$

II). $y^2 - 13y + 42=0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x \leq y$

e. $x = y$ or the relation cannot be established

45. Questions

I). $12x^2 - 41x + 34=0$

II). $3y^2 - 30y + 63=0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x \leq y$

e. $x = y$ or the relation cannot be established

Explanations:

1. Questions

The number of carbon pencils sold in shop D = 800 * 30/100 = 240

The number of coloured pencils sold in shop C = 240

The total number of pencils sold in shop C = 240 * 100/60 = 400

4x = 400

x = 100

Shop	The total number of pencils sold	The number of coloured pencils sold	The number of carbon pencils sold
A	500	100	400
B	450	225	225
C	400	240	160
D	800	560	240
E	400	120	280

Answer: A

The total number of pencils sold in shop F = 800 * 3/2 = 1200

The number of coloured pencils sold in shop F = 225 + 400 = 625

The number of carbon pencils sold in shop F = 1200 – 625 = 575

2. Questions

The number of carbon pencils sold in shop D = 800 * 30/100 = 240

The number of coloured pencils sold in shop C = 240

The total number of pencils sold in shop C = 240 * 100/60 = 400

4x = 400

x = 100

Shop	The total number of pencils sold	The number of coloured pencils sold	The number of carbon pencils sold
A	500	100	400
B	450	225	225
C	400	240	160
D	800	560	240
E	400	120	280

Answer: B

The total number of red and black coloured pencils sold in shop C = 240 * 35/100 = 84

The number of blue pencils sold in shop C = 240 – 84 = 156

The number of blue pencils sold in shop D = 156 + 150 = 306

The number of red and black pencils sold in shop D = 560 – 306 = 254

Required sum = 254 + 84 = 338

3. Questions

The number of carbon pencils sold in shop D = 800 * 30/100 = 240

The number of coloured pencils sold in shop C = 240

The total number of pencils sold in shop C = 240 * 100/60 = 400

4x = 400

x = 100

Shop	The total number of pencils sold	The number of coloured pencils sold	The number of carbon pencils sold
A	500	100	400
B	450	225	225
C	400	240	160
D	800	560	240
E	400	120	280

Answer: C

The number of woodless pencils sold in shop E = 280 * 115/100 = 322

The number of woodless pencils sold in shop A = 450 – 322 = 128

4. Questions

The number of carbon pencils sold in shop D = 800 * 30/100 = 240

The number of coloured pencils sold in shop C = 240

The total number of pencils sold in shop C = 240 * 100/60 = 400

4x = 400

x = 100

Shop	The total number of pencils sold	The number of coloured pencils sold	The number of carbon pencils sold
A	500	100	400
B	450	225	225
C	400	240	160
D	800	560	240
E	400	120	280

Answer: C

The total number of carbon pencils sold in all shops = (400 + 225 + 160 + 240 + 280) = 1305

Required average = 1305/5 = 261

5. Questions

The number of carbon pencils sold in shop D = 800 * 30/100 = 240

The number of coloured pencils sold in shop C = 240

The total number of pencils sold in shop C = 240 * 100/60 = 400

4x = 400

x = 100

Shop	The total number of pencils sold	The number of coloured pencils sold	The number of carbon pencils sold
A	500	100	400
B	450	225	225
C	400	240	160
D	800	560	240
E	400	120	280

Answer: B

The total number of pencils sold in shop B = 450

The number of carbon pencils sold in shop A = 400

Required percentage = (450-400)/400 * 100 = 12.5%more

6. Questions

Month	The number of people registered in music competition	The number of people registered in dance competition
January	450	280
February	320	300
March	250	240
April	400	380
May	300	180

Answer: A

The number of people registered for singing competition in April = 400* 108/100 = 432

Required sum = (400 + 380 + 432) = 1212

7. Questions

Month	The number of people registered in music competition	The number of people registered in dance competition
January	450	280
February	320	300
March	250	240
April	400	380
May	300	180

Answer: B

The number of people registered for the music competition in June = 200 + 250 = 450

The number of people registered for the dance competition in June = 750 – 450 = 300

8. Questions

Month	The number of people registered in music competition	The number of people registered in dance competition
January	450	280
February	320	300
March	250	240
April	400	380
May	300	180

Answer: B

The total number of people registered for music competition = (450 + 320 + 250 + 400 + 300) = 1720

9. Questions

Month	The number of people registered in music competition	The number of people registered in dance competition
January	450	280
February	320	300
March	250	240
April	400	380
May	300	180

Answer: D

The number of people registered for the music competition in March = 250

The number of people registered for the dance competition in May = 180

Required ratio = 250:180 = 25:18

10. Questions

Month	The number of people registered in music competition	The number of people registered in dance competition
January	450	280
February	320	300
March	250	240
April	400	380
May	300	180

Answer: B

The number of people registered for the dance competition in February = 300

The number of people registered for the dance competition in March = 240

Required difference = 300- 240 = 60

11. Questions

The total number of people watch movie B = 70

The total number of people watch movie C = 120

Let, the number of males = x

The number of females = y

x + 5y = 70 ----> (1)

4x + 4y = 120 ----> (2)

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

x = 20, y =10

The number of males who watched movie B = 20

The number of females who watched movie B = 5 * 10 = 50

The number of males who watched movie C = 4 * 20 = 80

The number of females who watched movie C = 4* 10 = 40

The number of females who watched movie A = 50 + 20 = 70

The number of males who watched movie A = 70 * 9/14 = 45

The number of females who watched movie D = 50/2 = 25

The number of males who watched movie D = 45 -10 = 35

Movies	The number of males watched	The number of females watched
A	45	70
B	20	50
C	80	40
D	35	25

Answer: B

The number of males watch movie E = 60 – 35 = 25

The number of females watch movie E = 70 * 6/7 = 60

Required sum = 25 + 60 = 85

12. Questions

The total number of people watch movie B = 70

The total number of people watch movie C = 120

Let, the number of males = x

The number of females = y

x + 5y = 70 ----> (1)

4x + 4y = 120 ----> (2)

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

x = 20, y =10

The number of males who watched movie B = 20

The number of females who watched movie B = 5 * 10 = 50

The number of males who watched movie C = 4 * 20 = 80

The number of females who watched movie C = 4* 10 = 40

The number of females who watched movie A = 50 + 20 = 70

The number of males who watched movie A = 70 * 9/14 = 45

The number of females who watched movie D = 50/2 = 25

The number of males who watched movie D = 45 -10 = 35

Movies	The number of males watched	The number of females watched
A	45	70
B	20	50
C	80	40
D	35	25

Answer: A

The number of male school students watch movie B = 20 * 40/100 = 8

The number of male college students watch movie B = 20 – 8 =12

The number of female school students watch movie B =8+10 = 18

The number of female college students watch movie B = 50 – 18 = 32

Required sum = 12+32 = 44

13. Questions

The total number of people watch movie B = 70

The total number of people watch movie C = 120

Let, the number of males = x

The number of females = y

x + 5y = 70 ----> (1)

4x + 4y = 120 ----> (2)

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

x = 20, y =10

The number of males who watched movie B = 20

The number of females who watched movie B = 5 * 10 = 50

The number of males who watched movie C = 4 * 20 = 80

The number of females who watched movie C = 4* 10 = 40

The number of females who watched movie A = 50 + 20 = 70

The number of males who watched movie A = 70 * 9/14 = 45

The number of females who watched movie D = 50/2 = 25

The number of males who watched movie D = 45 -10 = 35

Movies	The number of males watched	The number of females watched
A	45	70
B	20	50
C	80	40
D	35	25

Answer: C

The total number of people watch movie A = 45 + 70 = 115

The total number of people watch movie D = 35 + 25 = 60

Required ratio = 115:60 = 23:12

14. Questions

The total number of people watch movie B = 70

The total number of people watch movie C = 120

Let, the number of males = x

The number of females = y

x + 5y = 70 ----> (1)

4x + 4y = 120 ----> (2)

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

x = 20, y =10

The number of males who watched movie B = 20

The number of females who watched movie B = 5 * 10 = 50

The number of males who watched movie C = 4 * 20 = 80

The number of females who watched movie C = 4* 10 = 40

The number of females who watched movie A = 50 + 20 = 70

The number of males who watched movie A = 70 * 9/14 = 45

The number of females who watched movie D = 50/2 = 25

The number of males who watched movie D = 45 -10 = 35

Movies	The number of males watched	The number of females watched
A	45	70
B	20	50
C	80	40
D	35	25

Answer: B

The total number of males watch all movies = (45 + 20 + 80 + 35) = 180

15. Questions

The total number of people watch movie B = 70

The total number of people watch movie C = 120

Let, the number of males = x

The number of females = y

x + 5y = 70 ----> (1)

4x + 4y = 120 ----> (2)

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

x = 20, y =10

The number of males who watched movie B = 20

The number of females who watched movie B = 5 * 10 = 50

The number of males who watched movie C = 4 * 20 = 80

The number of females who watched movie C = 4* 10 = 40

The number of females who watched movie A = 50 + 20 = 70

The number of males who watched movie A = 70 * 9/14 = 45

The number of females who watched movie D = 50/2 = 25

The number of males who watched movie D = 45 -10 = 35

Movies	The number of males watched	The number of females watched
A	45	70
B	20	50
C	80	40
D	35	25

Answer: B

The number of females who watch movie B = 50

The number of males who watch movie B = 20

Required percentage = 50/20 * 100 = 250%

16. Questions

Answer: C

According to the question,

Let, the total work = 120 units

The efficiency of A = 120/24 = 5 units

The combined efficiency of A and B = 120/15 = 8 units

The efficiency of B = 8 – 5 = 3 units

The combined efficiency of B and C = 120/16 = 7.5 units

The efficiency of C = 7.5 – 3 = 4.5 units

Required ratio = 5:4.5 = 10:9

17. Questions

Answer: A

According to the question,

Let, the total quantity of the mixture = 100x

The initial quantity of milk in the mixture = 100x * 40/100 = 40x

The initial quantity of water in the mixture = 100x * 60/100 = 60x

(40x – 4x + 30)/(60x – 6x) =25/36

(36x + 30)/(60x – 6x) =25/36

1296x + 1080 = 1350x

54x = 1080

x = 20

The initial quantity of water in the mixture = 60 * 20 = 1200 litres

18. Questions

Answer: A

According to the question,

The speed of the boat = 15 km/hr

The speed of the stream = 5 km/hr

The downstream speed = 15 + 5 = 20 km/hr

The upstream speed = 15 – 5 = 10 km/hr

x/20 + 2x/10 = 50

5x/20 = 50

5x = 1000

x = 200

19. Questions

Answer: E

According to the question,

The cost price of the clock = Rs. 1000

720 = MP * 90/100

MP = Rs.800

The cost price of the pen = 1000 * 80/100 = Rs. 800

The selling price of the pen = Rs. 800

There is no profit or loss in this transaction

20. Questions

Answer: C

According to the question,

The present age of A and B = 24 * 2 = 48 years

The average age of A, B, C and D = 30 * 4 = 120 years

The age of C and D = 120 – 48 = 72 years

The present age of D = 72 * 5/12 = 30 years

The present age of C = 72 – 30 = 42 years

The present age of A = 42 * 2/3 = 28 years

Required average = (30 + 28)/2 = 29 years

21. Questions

Answer: B

15 % of 480 + 80 % of 320 + 20 % of 60 = ?

72 + 256 + 12 = ?

? = 340

22. Questions

Answer: D

√576 * ? + 248 ÷ 31 = 112 * √64

24 * ? + 8 = 112 * 8

? * 24 = 888

? = 37

23. Questions

Answer: D

36 * 7 + ? % of 348 = 43 * √324

252 + ? % of 348 = 43 * 18

? % of 348 = 522

? = 150

24. Questions

Answer: A

√529 * 4 + 45 % of 80 – 19 * 5 = ?

92 + 36 – 95 = ?

33 = ?

25. Questions

Answer: C

75 % of 200 + √4225 % of 40 + ? = 90 % of 240

150 + 26 + ? = 216

? = 40

26. Questions

Answer: E

2.003 + 5.006 – 12.9998 + 30.979 – 10.005 = x

x = 2 + 5 – 13 +31 – 10

x = 38 – 23

x = 15

27. Questions

Answer: A

25.03% of 247.91 – 15.18% of 140.05 = ?

62 – 21 = ?

? = 41

28. Questions

Answer: D

(82.01 * √50) ÷ ? = 287.08

574 /? = 287

? = 2

29. Questions

Answer: A

$$6000 \div 60 \times 85 = ? \times 25$$

$$\frac{6000}{60} \times \frac{85}{25} = ?$$

? = 340

30. Questions

Answer: E

$$\frac{2}{3} \times \frac{6}{8} \times \frac{2}{3} \times \frac{3}{5} \times 134 = ?$$

$$\frac{134}{5} = ?$$

? =26.8

? = 27

31. Questions

Answer: E

10 + 2 = 12

12 + 4 = 16

16 + 8 = 24

24 + 16 = 40

40 + 32 = **72**

32. Questions

Answer: D

12 * 0.5 = 6

10 * 1 = 10

8 * 1.5 = 12

6 * 2 = 12

4 * 2.5 = 10

2 * 3 = **6**

33. Questions

Answer: C

120 – 11 * 1 = 109

109 – 11 * 2 = **87**

87 – 11 * 3 = 54

54 – 11 * 4 = 10

10 – 11 * 5 = -45

34. Questions

Answer: A

63 * 2 + 1 = **127**

127 * 2 + 2 = 256

256 * 2 + 3 = 515

515 * 2 + 4 = 1034

1034 * 2 + 5 = 2073

35. Questions

Answer: A

30 * 5 = 150

150 * 4.5 = 675

675 * 4 = **2700**

2700 * 3.5 = 9450

9450 * 3 = 28350

36. Questions

Answer: E

75 + 50 = 125

125 + 45 = 170

170 + 40 = 210

210 + 35 = 245

245 + 30 = **275**

37. Questions

Answer: A

$6 + 3^2 = 15$

$15 + 4^2 = 31$

$31 + 5^2 = 56$

$56 + 6^2 = 92$

$92 + 7^2 =$ **141**

38. Questions

Answer: A

$216 - 1^3 = 215$

$215 - 3^2 = 206$

$206 - 5^3 = 81$

$81 - 7^2 = 32$

$32 - 9^3 =$ **-697**

39. Questions

Answer: C

$29 + (2 + 9) = 40$

$40 + (4 + 0) = 44$

$44 + (4 + 4) = 52$

$52 + (5 + 2) =$ **59**

$59 + (5 + 9) = 73$

40. Questions

Answer: A

$19 + 12^2 = 163$

$163 + 14^2 = 359$

$359 + 16^2 =$ **615**

$615 + 18^2 = 939$

$939 + 20^2 = 1339$

41. Questions

Answer: C

I). $2x^2 + 9x + 10 = 0$

$2x^2 + 5x + 4x + 10 = 0$

$x(2x+5) + 2(x+5) = 0$

$(2x+5)(x+2) = 0$

$x = -5/2, x = -2$

II). $6y^2 + 17y + 12 = 0$

$6y^2 + 9y + 8y + 12 = 0$

$3y(2y + 3) + 4(2y+3) = 0$

$(2y + 3)(3y + 4) = 0$

$y = -3/2, y = -4/3$

$x < y$

42. Questions

Answer: B

I). $x^2 - 11x + 30 = 0$

$x^2 - 6x - 5x + 30 = 0$

$x(x-6) - 5(x-6) = 0$

$(x-6)(x-5) = 0$

$x = 6, x = 5$

II). $y^2 - 8y + 15 = 0$

$y^2 - 5y - 3y + 15 = 0$

$y(y - 5) - 3(y-5) = 0$

$(y-5)(y-3) = 0$

$y = 5, y = 3$

$x \geq y$

43. Questions

Answer: A

II). $y = \sqrt{4} = +2$

I). x+ 4y = 12

x + 4*2 = 12

x = 12-8=4

x > y

44. Questions

Answer: E

$2x^2 – 2x – 84=0$

$2x^2 – 14x + 12x – 84=0$

$2x(x – 7) + 12(x – 7)=0$

$(2x + 12)(x – 7)=0$

x =-6, 7

$y^2 – 13y + 42=0$

$y^2 – 6y – 7y + 42=0$

$y(y – 6) – 7(y – 6)=0$

$(y – 7)(y – 6)=0$

y =7, 6

Relationship cannot be established between x and y.

45. Questions

Answer: C

$12x^2 – 41x + 34=0$

$12x^2 – 24x – 17x + 34=0$

$12x(x – 2) – 17(x – 2)=0$

$(12x – 17)(x – 2)=0$

x=17/12, 2

$3y^2 – 30y + 63=0$

$3y^2 – 21y – 9y + 63=0$

$3y(y – 7) – 9(y – 7)=0$

$(3y – 9)(y – 7)=0$

y=3, 7

Hence x < y