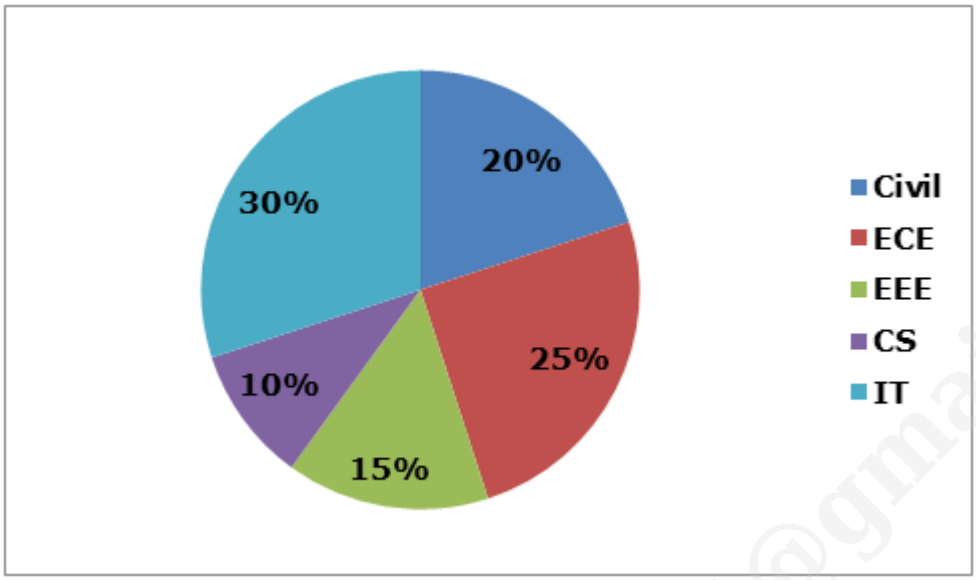
1. Questions

Study the following information carefully and answer the questions.

The given pie chart shows the percentage distribution of number of students studying in five different streams namely civil, ECE, EEE, CS and IT respectively. The total number of students studying in civil and ECE is 1800.



The ratio of males to females studying in the IT stream is 5:3. 40% of the males studying in IT stream are from college A, and the rest are from college B. The number of students studying in IT stream at College A is 450. Find the number of females studying in IT stream at college B.

a. 300

b. 280

c. 360

d. 120

e. 240

2. Questions

The total number of students studying in Mechanical stream is 15% more than that of CS. The ratio of males to females studying in Mechanical stream is 11:12. Find the difference between the numbers of male and female students studying in Mechanical stream.

a. 40

b. 30

c. 20

d. 50

e. 10

3. Questions

If 1/16th of the students studying in the civil stream are shifted to the ECE department, then find the ratio of the numbers of students studying in the civil stream and ECE stream.

a. 7:5

b. 8:3

c. 5:7

d. 11:8

e. 9:8

4. Questions

Find the total number of students studying in all streams together.

a. 3200

b. 4000

c. 3500

d. 4500

e. 2000

5. Questions

The total number of students studying in the IT stream is what percentage of the total number of students studying in ECE stream?

a. 110%

b. 90%

c. 120%

d. 80%

e. 160%

6. Questions

Study the following information carefully and answer the questions.

Some girls and boys joined in four different types of schools namely A, B, C and D respectively. The number of boys who joined in school A is 25 which is half of the number of girls who joined in school B. The ratio of the number of girls who joined in school A to boys who joined in school C is 2:9. The total number of girls who joined in schools C and D is equal to the number of girls who joined in school B. The total number of students who joined in school C is 65 and the ratio of the number of boys to girls who joined in school D is 1:2. The number of boys who joined in school B is 20% more than that of girls. The ratio of number of boys in school B to girls in school A is 6:1.

The total number of students who joined in school E is 85 more than that in school A, and 35% of the students who joined in school E are boys. Find the number of girls who joined in school E.

a. 68

b. 78

c. 56

d. 72

e. 90

7. Questions

In school B, out of the total number of boys, 20% of boys joined class 5th, and the remaining students joined class 8^{th}. The number of girls who joined 8th grade is 20 less than that of boys who joined in School B. Find the total number of students who joined in class 5 in School B.

a. 35

b. 64

c. 34

d. 27

e. 20

8. Questions

Find the difference between the total number of students joined in school C and school D.

a. 20

b. 10

c. 40

d. 32

e. 55

9. Questions

Find the ratio between the number of girls who joined in school B to the number of boys who joined in school C.

a. 9:10

b. 12:13

c. 10:9

d. 15:16

e. 3:4

10. Questions

Find the total number of boys who joined in all schools together.

a. 155

b. 125

c. 145

d. 150

e. 90

11. Questions

Study the following information carefully and answer the questions.

The given table chart shows the total number of people attending function and the ratio of the number of people attending the marriage to the birthday function on five different days namely Monday, Tuesday, Wednesday, Thursday and Friday respectively.

Days	Total number of people attending the function	Ratio of number of people attending the marriage to birthday function
Monday	1200	5:7
Tuesday	900	11:7
Wednesday	1800	4:5
Thursday	1000	3:2
Friday	800	9:7

The ratio of the number of people attending the birthday to baby shower function on Monday is 4:3. Find the difference between the number of people attending the baby shower function on Monday and the birthday function on Tuesday.

a. 350

b. 345

c. 175

d. 229

e. 310

12. Questions

The number of people attending marriage and birthday functions on Saturday is x% and 5x more than that on Wednesday. The total number of people attending the function on Saturday is 2060. Find the value of x.

a. 25

b. 20

c. 34

d. 40

e. 50

13. Questions

On Friday, the number of boys attending marriage function is 1/5th of the number of people attending marriage function on Tuesday, and the remaining are girls, and the number of girls attending both the functions is 650. Find the number of boys attending the birthday function on Friday.

a. 40

b. 35

c. 65

d. 70

e. 80

14. Questions

Find the total number of people attending birthday function on all days together.

a. 2500

b. 2800

c. 3200

d. 3500

e. 4200

15. Questions

Find the difference between the total number of people attending the function on Thursday and Friday.

a. 180

b. 200

c. 150

d. 500

e. 320

16. Questions

The ratio of the numerical value of the area of the square to the perimeter of the square is 2:1. The length of the rectangle is 4 times the side of the square, and the width of the rectangle is 20 cm. Find the area of the rectangle.

a. 560 cm^2

b. 640 cm^2

c. 820 cm^2

d. 720 cm^2

e. 480 cm^2

17. Questions

Seven years hence the ratio of ages of A and B will be 5:2, respectively. Three years ago, the age ratio of A to B was 15:4. Find the present age of B.

a. 15 years

b. 48 years

c. 45 years

d. 25 years

e. 19 years

18. Questions

Find the difference between the simple interest received while investing Rs. 6250 for 3 years at a rate of 20% p.a. and the compound interest received on investing Rs. 4200 for 2 years at a rate of 10% p.a.

a. Rs. 2868

b. Rs. 3200

c. Rs. 2356

d. Rs. 1670

e. Rs. 2100

19. Questions

16 men working 8 hours a day take 10 days to cut a tree, whereas 32 children working 10 hours a day take 16 days to cut the same tree. Find the time taken to complete the same work by 32 children and 2 men together.

a. 120 days

b. 128 days

c. 132 days

d. 145 days

e. 110 days

20. Questions

The cost price of the desk is Rs. 1200, which is marked 32% above the cost price and sold for a discount of 15%. Find the selling price of the desk.

a. Rs. 1346.4

b. Rs. 1280.5

c. Rs. 1000.5

d. Rs. 1320.8

e. Rs. 988.6

21. Questions

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

60% of 450 + 90% of 340 = 47 + $?^2$

a. 25

b. 23

c. 40

d. 13

e. 43

22. Questions

160 of 15% + 32% of 650 – 120 of 40% = ?

a. 175

b. 184

c. 196

d. 164

e. 212

23. Questions

27^2 + 71 = ?% of 800

a. 120

b. 100

c. 180

d. 220

e. 90

24. Questions

(13/14) * 7/12 * 4(4/5) = 390/?

a. 120

b. 150

c. 190

d. 210

e. 240

25. Questions

$34 * 8 + (12)^2 - 23 * 3 = ?$

a. 247

b. 347

c. 280

d. 430

e. 246

26. Questions

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

72.01 * 7.99 + 62.5% of 64 = $?^3$ +104.43

a. 7

b. 6

c. 8

d. 11

e. 16

27. Questions

$?^2$ = 19.57% of 12.99% of 499.9 + 12.32

a. 8

b. 5

c. 12

d. 6

e. 11

28. Questions

(16.99% of 699.9) + √441.01 = 1.99 * ?

a. 65

b. 70

c. 85

d. 50

e. 45

29. Questions

(559.85/15.78) + (219.9/11.01) = ?

a. 50

b. 55

c. 86

d. 65

e. 40

30. Questions

(50.14 * 10.07) + $\sqrt[3]{1331.01}$ = ? + 12.9

a. 498

b. 345

c. 490

d. 280

e. 469

31. Questions

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

22, 37, 51, ?, 77

a. 65

b. 55

c. 72

d. 63

e. 59

32. Questions

72, ?, 120, -24, 232

a. 53

b. 72

c. 56

d. 111

e. 99

33. Questions

14, 42, 210, ?, 3150

a. 450

b. 630

c. 520

d. 650

e. 580

34. Questions

34, 50, ?, 52, 30

a. 32

b. 44

c. 45

d. 51

e. 67

35. Questions

?, 21, 105, 35, 175

a. 60

b. 18

c. 63

d. 56

e. 24

36. Questions

Find out the wrong number in the following number series.

6, 12, 24, 45, 66

a. 66

b. 24

c. 12

d. 45

e. 6

37. Questions

24, 16, 12, 18, 36

a. 24

b. 18

c. 36

d. 12

e. 16

38. Questions

66, 128, 225, 350, 523

a. 66

b. 523

c. 225

d. 340

e. 128

39. Questions

6, 12, 40, 144, 720

a. 12

b. 40

c. 720

d. 6

e. 144

40. Questions

60, 110, 120, 150, 180

a. 120

b. 150

c. 180

d. 110

e. 60

41. 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). $x^2 + 4x - 45 = 0$

ii). $y^2 - 3y - 88 = 0$

a. $x > y$

b. $x \geq y$

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

d. $x < y$

e. $x \leq y$

42. Questions

i). $x^2 - x - 42 = 0$

ii). $y^2 + 4y - 32 = 0$

a. $x > y$

b. $x \geq y$

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

d. $x < y$

e. $x \leq y$

43. Questions

i). $x^2 - 27x + 180 = 0$

ii). $2y^2 - 17y + 15 = 0$

a. $x > y$

b. $x \geq y$

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

d. $x < y$

e. $x \leq y$

44. Questions

i). $x^2 - 17x + 42 = 0$

ii). $y^2 = 25\%$ of $800 - 2^2$

a. $x > y$

b. $x \geq y$

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

d. $x < y$

e. $x \leq y$

45. Questions

i). $x^2 + 24x = -44$

ii). $5y^2 + 15y + 10 = 0$

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

The total number of students studying in civil and ECE = 1800

The total number of students studying in all stream = 1800 * 100/45 = 4000

The total number of students studying in civil stream = 4000 * 20/100 = 800

The total number of students studying in ECE stream = 4000 * 25/100 = 1000

The total number of students studying in EEE stream = 4000 * 15/100 = 600

The total number of students studying in CS stream = 4000 * 10/100 = 400

The total number of students studying in IT stream = 4000 * 30/100 = 1200

Answer: A

The total number of students studying in IT stream = 1200

The number of male students studying in IT stream = 1200 * 5/8 = 750

The number of female students studying in IT stream = 1200 * 3/8 = 450

The number of males studying in college A in IT stream = 750 * 40/100 = 300

The number of females studying in college A in IT stream = 450 – 300 = 150

The number of females studying in college B in IT stream = 450 – 150 = 300

2. Questions

The total number of students studying in civil and ECE = 1800

The total number of students studying in all stream = 1800 * 100/45 = 4000

The total number of students studying in civil stream = 4000 * 20/100 = 800

The total number of students studying in ECE stream = 4000 * 25/100 = 1000

The total number of students studying in EEE stream = 4000 * 15/100 = 600

The total number of students studying in CS stream = 4000 * 10/100 = 400

The total number of students studying in IT stream = 4000 * 30/100 = 1200

Answer: C

The total number of students studying in Mechanical stream = 400 * 115/100 = 460

The number of male studying in Mechanical stream = 460 * 11/23 = 220

The number of female studying in mechanical stream = 460 * 13/23 = 240

Required difference = 240 – 220 = 20

3. Questions

The total number of students studying in civil and ECE = 1800

The total number of students studying in all stream = 1800 * 100/45 = 4000

The total number of students studying in civil stream = 4000 * 20/100 = 800

The total number of students studying in ECE stream = 4000 * 25/100 = 1000

The total number of students studying in EEE stream = 4000 * 15/100 = 600

The total number of students studying in CS stream = 4000 * 10/100 = 400

The total number of students studying in IT stream = 4000 * 30/100 = 1200

Answer: C

The number of students studying in civil stream = 800 * 15/16 = 750

The number of students studying in ECE stream = 1000+50 = 1050

Required ratio = 750: 1050 = 15 : 21 = 5:7

4. Questions

The total number of students studying in civil and ECE = 1800

The total number of students studying in all stream = 1800 * 100/45 = 4000

The total number of students studying in civil stream = 4000 * 20/100 = 800

The total number of students studying in ECE stream = 4000 * 25/100 = 1000

The total number of students studying in EEE stream = 4000 * 15/100 = 600

The total number of students studying in CS stream = 4000 * 10/100 = 400

The total number of students studying in IT stream = 4000 * 30/100 = 1200

Answer: B

The total number of students studying in all streams together = 4000

5. Questions

The total number of students studying in civil and ECE = 1800

The total number of students studying in all stream = 1800 * 100/45 = 4000

The total number of students studying in civil stream = 4000 * 20/100 = 800

The total number of students studying in ECE stream = 4000 * 25/100 = 1000

The total number of students studying in EEE stream = 4000 * 15/100 = 600

The total number of students studying in CS stream = 4000 * 10/100 = 400

The total number of students studying in IT stream = 4000 * 30/100 = 1200

Answer: C

Required percentage = 1200/1000 * 100 = 120%

6. Questions

The number of boys who joined in school A = 25

The number of girls who joined in school B = 25 * 2 = 50

The number of boys who joined in school B = 50 * 120/100 = 60

The number of girls who joined in school A = 60 * 1/6 = 10

The number of boys who joined in school C = 10 * 9/2 = 45

The total number of girls who joined in school C and D = 50

The number of girls who joined in school C = 65 -45 = 20

The number of girls who joined in school D = 50 – 20 = 30

The number of boys who joined in school D = 30 * 1/2 = 15

School	The number of boys who joined	The number of girls who joined
A	25	10
B	60	50
C	45	20
D	15	30

Answer: B

The total number of students who joined in school E = 35+85 = 120

The number of girls who joined in school E = 120 * 65/100 = 78

7. Questions

The number of boys who joined in school A = 25

The number of girls who joined in school B = 25 * 2 = 50

The number of boys who joined in school B = 50 * 120/100 = 60

The number of girls who joined in school A = 60 * 1/6 = 10

The number of boys who joined in school C = 10 * 9/2 = 45

The total number of girls who joined in school C and D = 50

The number of girls who joined in school C = 65 -45 = 20

The number of girls who joined in school D = 50 – 20 = 30

The number of boys who joined in school D = 30 * 1/2 = 15

School	The number of boys who joined	The number of girls who joined
A	25	10
B	60	50
C	45	20
D	15	30

Answer: C

The number of boys who joined in class 5th in School B = 60 * 20/100 = 12

The number of boys who joined in class 8th in School B = 60 – 12 = 48

The number of girls who joined in class 8th in School B = 48 – 20 = 28

The number of girls who joined in class 5th in School B = 50 – 28 = 22

Required sum = 22+12 = 34

8. Questions

The number of boys who joined in school A = 25

The number of girls who joined in school B = 25 * 2 = 50

The number of boys who joined in school B = 50 * 120/100 = 60

The number of girls who joined in school A = 60 * 1/6 = 10

The number of boys who joined in school C = 10 * 9/2 = 45

The total number of girls who joined in school C and D = 50

The number of girls who joined in school C = 65 -45 = 20

The number of girls who joined in school D = 50 – 20 = 30

The number of boys who joined in school D = 30 * 1/2 = 15

School	The number of boys who joined	The number of girls who joined
A	25	10
B	60	50
C	45	20
D	15	30

Answer: A

The total number of students who joined in school C = 45 + 20 = 65

The total number of students who joined in school D = 15 + 30 = 45

Required difference = 65 – 45 = 20

9. Questions

The number of boys who joined in school A = 25

The number of girls who joined in school B = 25 * 2 = 50

The number of boys who joined in school B = 50 * 120/100 = 60

The number of girls who joined in school A = 60 * 1/6 = 10

The number of boys who joined in school C = 10 * 9/2 = 45

The total number of girls who joined in school C and D = 50

The number of girls who joined in school C = 65 -45 = 20

The number of girls who joined in school D = 50 – 20 = 30

The number of boys who joined in school D = 30 * 1/2 = 15

School	The number of boys who joined	The number of girls who joined
A	25	10
B	60	50
C	45	20
D	15	30

Answer: C

Required ratio = 50: 45 = 10:9

10. Questions

The number of boys who joined in school A = 25

The number of girls who joined in school B = 25 * 2 = 50

The number of boys who joined in school B = 50 * 120/100 = 60

The number of girls who joined in school A = 60 * 1/6 = 10

The number of boys who joined in school C = 10 * 9/2 = 45

The total number of girls who joined in school C and D = 50

The number of girls who joined in school C = 65 -45 = 20

The number of girls who joined in school D = 50 – 20 = 30

The number of boys who joined in school D = 30 * 1/2 = 15

School	The number of boys who joined	The number of girls who joined
A	25	10
B	60	50
C	45	20
D	15	30

Answer: C

The total number of boys who joined in all schools together = (25+60+45+15) = 145

11. Questions

The total number of people attending the function on Monday = 1200

The number of people attending the marriage function on Monday = 1200 * 5/12 = 500

The number of people attending the birthday function on Monday = 1200 * 7/12 = 700

Similarly,

Days	The total number of people attending the function	The number of people attending the marriage function	The number of people attending the birthday function
Monday	1200	500	700
Tuesday	900	550	350
Wednesday	1800	800	1000
Thursday	1000	600	400
Friday	800	450	350

Answer: C

The number of people attending the baby shower function on Monday = 700 * 3/4 = 525

Required difference = (525 – 350) = 175

12. Questions

The total number of people attending the function on Monday = 1200

The number of people attending the marriage function on Monday = 1200 * 5/12 = 500

The number of people attending the birthday function on Monday = 1200 * 7/12 = 700

Similarly,

Days	The total number of people attending the function	The number of people attending the marriage function	The number of people attending the birthday function
Monday	1200	500	700
Tuesday	900	550	350
Wednesday	1800	800	1000
Thursday	1000	600	400
Friday	800	450	350

Answer: B

800 *(100+x)/100 + 1000+5x = 2060

800 + 8x + 1000 + 5x = 2060

1800 +13x = 2060

13x = 260

x = 20

13. Questions

The total number of people attending the function on Monday = 1200

The number of people attending the marriage function on Monday = 1200 * 5/12 = 500

The number of people attending the birthday function on Monday = 1200 * 7/12 = 700

Similarly,

Days	The total number of people attending the function	The number of people attending the marriage function	The number of people attending the birthday function
Monday	1200	500	700
Tuesday	900	550	350
Wednesday	1800	800	1000
Thursday	1000	600	400
Friday	800	450	350

Answer: A

The number of boys attending the marriage function on Friday = 550/5 = 110

The number of girls attending the marriage function on Friday = 450 – 110 = 340

The number of girls attending the birthday function on Friday = 650 – 340 = 310

The number of boys attending the birthday function on Friday = 350 – 310 = 40

14. Questions

The total number of people attending the function on Monday = 1200

The number of people attending the marriage function on Monday = 1200 * 5/12 = 500

The number of people attending the birthday function on Monday = 1200 * 7/12 = 700

Similarly,

Days	The total number of people attending the function	The number of people attending the marriage function	The number of people attending the birthday function
Monday	1200	500	700
Tuesday	900	550	350
Wednesday	1800	800	1000
Thursday	1000	600	400
Friday	800	450	350

Answer: B

The total number of people attending the birthday function on all days together = (700 + 350 + 1000 + 400 + 350) = 2800

15. Questions

The total number of people attending the function on Monday = 1200

The number of people attending the marriage function on Monday = 1200 * 5/12 = 500

The number of people attending the birthday function on Monday = 1200 * 7/12 = 700

Similarly,

Days	The total number of people attending the function	The number of people attending the marriage function	The number of people attending the birthday function
Monday	1200	500	700
Tuesday	900	550	350
Wednesday	1800	800	1000
Thursday	1000	600	400
Friday	800	450	350

Answer: B

Required difference = 1000 – 800 = 200

16. Questions

Answer: B

According to the question,

Area of the square = a^2 cm^2

Perimeter of the square = 4a cm

$a^2/4a = 2/1$

a/4 = 2/1

a = 8

Length of the rectangle = 8 * 4 = 32 cm

Width of the rectangle = 20 cm

Area of the rectangle = 32 * 20 = 640 cm^2

17. Questions

Answer: A

Let, the age of A three years ago be 15x

The age of B three years ago = 4x

(15x + 3+7)/(4x +3+7) = 5/2

(15x + 10)/(4x + 10) = 5/2

30x + 20 = 20x + 50

10x = 30

x = 3

The present age of B = 4 * 3 + 3 = 15 years

18. Questions

Answer: A

According to the question,

SI = PNR/100

SI = 6250 * 3 * 20/100

SI = Rs.3750

CI = $P(1+R/100)^n$ – P

= 4200 * 1.1 * 1.1 – 4200

= Rs.882

Required difference = 3750 – 882 = Rs. 2868

19. Questions

Answer: B

According to the question,

16m * 8 * 10 = 32c * 10 * 16

1280 m = 5120 c

1m = 4c

The total work = 64c * 80

= (64c * 80)/ (32c + 8c)

= 128 days

20. Questions

Answer: A

According to the question,

The cost price of the desk = Rs. 1200

The marked price of the desk = 1200 * 132/100 = Rs. 1584

The selling price of the desk = 1584 * 85/100 = Rs. 1346.4

21. Questions

Answer: B

60% of 450 + 90% of 340 = 47 + $?^2$

270 + 306 = 47 + $?^2$

576 -47 = $?^2$

529 = $?^2$

? = 23

22. Questions

Answer: B

160 of 15% + 32% of 650 – 120 of 40% = ?

24 + 208 – 48 = ?

232 – 48 = ?

? = 184

23. Questions

Answer: B

27^2 + 71 = ?% of 800

729 + 71 = ?% of 800

800 = ?/100

? = 100

24. Questions

Answer: B

(13/14) * 7/12 * 4(4/5) = 390/?

13/14 * 7/12 * 24/5 = 390/?

13/5 = 390/?

? = 150

25. Questions

Answer: B

$34 * 8 + (12)^2 - 23 * 3 = ?$

272 + 144 – 69 = ?

416 – 69 = ?

? = 347

26. Questions

Answer: C

72.01 * 7.99 + 62.5% of 64 = $?^3$ +104.43

576 + 40 = $?^3$ + 104

616 – 104 = $?^3$

$?^3$ = 512

? =8

27. Questions

Answer: B

$?^2$ = 19.57% of 12.99% of 499.9 + 12.32

$?^2$ = 13 + 12

$?^2$ = 25

? = 5

28. Questions

Answer: B

(16.99% of 699.9) + √441.01 = 1.99 * ?

119 + 21 = 2 * ?

140 = 2 * ?

? = 70

29. Questions

Answer: B

(559.85/15.78) + (219.9/11.01) = ?

(560/16) + (220/11) = ?

35 + 20 = ?

? = 55

30. Questions

Answer: A

(50.14 * 10.07) + $\sqrt[3]{1331.01}$ = ? + 12.9

500 + 11 = ? + 13

511 = ? + 13

? = 498

31. Questions

Answer: A

8 * 3 – 2 = 22

8 * 5 – 3 = 37

8 * 7 – 5 = 51

8 * 9 – 7 = 65

8 * 11 – 11 = 77

32. Questions

Answer: C

$72 - 4^2 = 56$

$56 + 8^2 = 120$

$120 - 12^2 = -24$

$-24 + 16^2 = 232$

33. Questions

Answer: B

14 * 3 = 42

42 * 5 = 210

210 * 3 = 630

630 * 5 = 3150

34. Questions

Answer: A

34 + 16 = 50

50 – 18 = 32

32 + 20 = 52

52 – 22 = 30

35. Questions

Answer: C

63/3 = 21

21 * 5 = 105

105/3 = 35

35 * 5 = 175

36. Questions

Answer: D

6 + 6 = 12

12 + 12 = 24

24 + 18 = 42

42 + 24 = 66

37. Questions

Answer: E

24 * 0.5 = 12

12 * 1 = 12

12 * 1.5 = 18

18 * 2 = 36

38. Questions

Answer: C

$4^3 + 2 = 66$

$5^3 + 3 = 128$

$6^3 + 5 = 221$

$7^3 + 7 = 350$

$8^3 + 11 = 523$

39. Questions

Answer: B

6 * 2 = 12

12 * 3 = 36

36 * 4 = 144

144 * 5 = 720

40. Questions

Answer: D

15 * 4 = 60

15 * 6 = 90

15 * 8 = 120

15 * 10 = 150

15 * 12 = 180

41. Questions

Answer: C

$x^2 + 4x – 45 = 0$

$x^2 + 9x – 5x – 45 = 0$

(x +9) (x -5) =0

x = -9, 5

$y^2 – 3y – 88 = 0$

$y^2 – 11y + 8y – 88 = 0$

(y -11) (y+8) =0

y = 11, -8

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

42. Questions

Answer: C

$x^2 – x – 42 = 0$

x^2 -7x +6x – 42 =0

(x -7) (x +6) =0

x = 7, -6

y^2 + 4y – 32 =0

y^2 + 8y -4y -32 =0

(y +8) (y -4) =0

y = 4, -8

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

43. Questions

Answer: A

x^2 -27x + 180 = 0

x^2 – 12x – 15x + 180 =0

(x-12) (x-15) =0

x = 12, 15

$2y^2$ - 17y + 15 = 0

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

(2y - 15) (2y -2) =0

y = 7.5, 1

Hence x > y

44. Questions

Answer: C

x^2 – 17x + 42 =0

x^2 – 14x -3x + 42 =0

(x-14) (x -3) =0

x = 14, 3

y^2 = 25% of 800 - 2^2

y^2 = 200 -4

y^2 = 196

y = 14, -14

Hence, x = y or relationship cannot be determined.

45. Questions

Answer: E

$x^2 + 24x = -44$

$x^2 + 24x + 44 = 0$

$x^2 + 22x + 2x - 44 = 0$

$(x + 22)(x + 2) = 0$

$x = -22, -2$

$5y^2 + 15y + 10 = 0$

$5y^2 + 10y + 5y + 10 = 0$

$(5y + 10)(5y + 5) = 0$

$y = -2, -1$

Hence, $x \leq y$