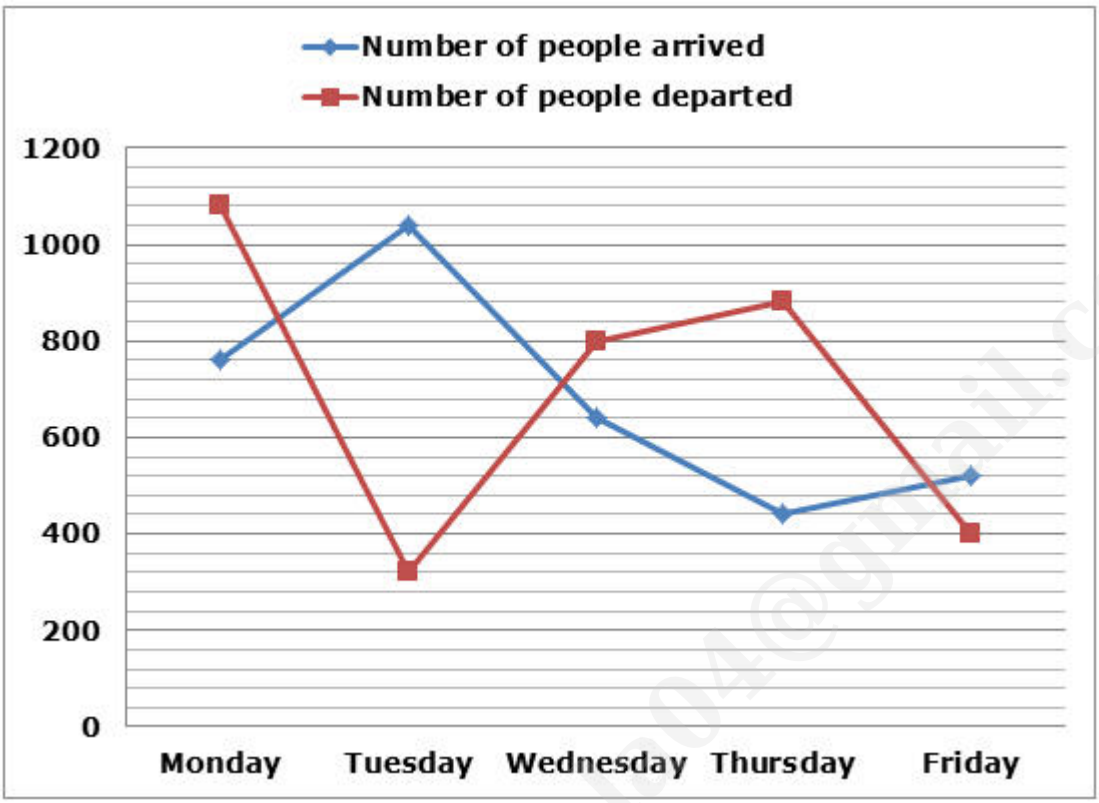
1. Questions

Read the data carefully and answer the following questions.

The below line graph shows the number of people who arrived and departed through Indigo Airlines at the Airport on five different days, i.e., Monday to Friday.



NOTE:

i). Total number of people = Number of people arrived + Number of people departed.

If 2/5th of the number of people who departed through Indigo Airlines on Monday are males and 20% of the people who arrived through the same airline on Tuesday are males, then find the total number of females who arrived and departed on Tuesday and Monday respectively.

a. 1500

b. 1480

c. 1560

d. 2390

e. 1200

2. Questions

The difference between the number of people who arrived on Monday and Wednesday is 'S+100' and the number of people who departed from the airport on Wednesday and Thursday together is 'T+200'. Find the average value of S and T.

a. 120

b. 850

c. 750

d. 340

e. 400

3. Questions

The number of people who arrived through Vistara Airlines on Tuesday is 20% more than the number of people who arrived through Indigo Airlines on Wednesday, and the ratio between the number of males to the number of females who arrived through Vistara Airlines on Tuesday is 1:2. Find the number of females who arrived through Vistara Airlines on Tuesday.

a. 200

b. 230

c. 512

d. 300

e. 320

4. Questions

Find the ratio between the number of people who arrived through Indigo Airlines on Monday and Tuesday to the number of people who departed through Indigo Airlines on Wednesday and Friday.

a. 1:1

b. 3:7

c. 3:2

d. 3:4

e. 1:2

5. Questions

20% of the total number of people who departed on Wednesday is below 18 years, and 30% of the total number of people who departed on the same day is above 18 years but below 50 years. The number of people who departed on Wednesday whose age is above 50 years is what percent of the total number of people who arrived and departed on the same day.

a. 10%

b. 24%

c. 27.77%

d. 52.22%

e. 18.18%

6. Questions

Read the data carefully and answer the following questions.

In a sports Academy 'X', there are a certain number of students who like three sports i.e., Cricket, Badminton, and Kabaddi. The total number of girls who like Cricket is 30% more than the number of Boys who like Badminton; the ratio between the number of boys who like Badminton to Kabaddi is 1:2. The average number of boys who like Cricket and the number of girls who like Kabaddi is 110. The ratio between the number of girls who like Badminton to the number of boys who like Cricket is 2:3. 80% of the girls in the sports academy like kabaddi out of the total number of students who like Kabaddi. The total number of students who like Cricket in the sports academy is 86.

Note :

I). Each student likes exactly one sport.

II). All the information is for the year 2022.

If the number of boys who like tennis is 20% more than the number of boys who like cricket, then find the ratio between the number of boys who like tennis to the number of girls who like Cricket.

a. 33:13

b. 35:13

c. 12:13

d. 36:13

e. 11:13

7. Questions

The number of girls who like badminton is what percent of the average number of girls who like badminton and Kabaddi?

a. 40%

b. 50%

c. 30%

d. 36%

e. 14%

8. Questions

Find the difference between the average number of students who like badminton to the average number of students who like Kabaddi.

a. 30

b. 70

c. 60

d. 50

e. 45

9. Questions

In 2023, the number of boys who like Kabaddi will decrease by 20%, whereas the number of girls who like Kabaddi will increase by 40%. The number of students who like Kabaddi in 2023 is how much more or less than 2022?

a. 45 less

b. 56 more

c. 78 more

d. 67 less

e. 90 more

10. Questions

The sum of the number of girls who like badminton and Kabaddi is 'X+Y' and the difference between the number of boys who like cricket and badminton is 'X-Y', find the value of Y. (X and Y both are positive integers.)

a. 70

b. 56

c. 80

d. 67

e. 100

11. Questions

The income of Ramesh is 20% more than the income of Somesh. The income of Ramesh is increased by P% while the income of Somesh is increased by (P+10)%, so the ratio between the incomes of Ramesh to Somesh is 39/35. Find the value of (P+10).

a. 67

b. 45

c. 40

d. 56

e. 70

12. Questions

Jar A contains milk and water in the ratio 7:4. If 12 litres of milk are added to the mixture and 6 litres of water are taken out of the jar, then the final quantity of water to milk in the jar is 1:3.

Find the initial quantity of water in jar A.

a. 12 litres

b. 10 litres

c. 24 litres

d. 34 litres

e. 45 litres

13. Questions

The length of the rectangle is 20% more than the breadth of the rectangle and the perimeter of the rectangle is 220 cm. If the radius of a cylinder is 3 cm more than the length of the rectangle and the height of the cylinder is 20% more than the breadth of the rectangle, then find 1/6th of the volume of the cylinder.

a. 124750 cm^2

b. 124760 cm^2

c. 124770 cm^2

d. 124740 cm^2

e. 124700 cm^2

14. Questions

On Monday, a boat covers (z+10) km upstream in 55 hours, and on Tuesday, the same boat covers (z+120) km downstream in 10 hours. Find the distance covered by the boat on Monday if the speed of the boat in still water is 20% more than the speed of the stream.

a. 140 km

b. 110 km

c. 160 km

d. 150 km

e. 100 km

15. Questions

The present age of B is 30% more than the present age of D, and the present age of C is 20% less than the present age of A. If the difference between the ages of C and B is 15 years, then find the present age of D. it is given that the ages of D and A are equal.

a. 11 years

b. 30 years

c. 20 years

d. 15 years

e. 21 years

16. Questions

The length of the Shatabdi Express is 1200 m and the length of the Rajdhani Express is S% more than the length of the Shatabdi Express. The time taken by the Shatabdi Express and Rajdhani Express to cross a man who is standing on the station is 30 seconds and 37.5 seconds, respectively. Find the value of (S+10); consider that the speed of both trains is equal.

a. 35

b. 23

c. 45

d. 67

e. 90

17. Questions

Reeta invested Rs.x in scheme A, which offers compound interest at a rate of 20% per annumth. At the same time, she invested the same amount in scheme B, which offers simple interest at a rate of 30% per annum. Find the value of X if the interest received from scheme A is 22/15 times the simple interest received from scheme B after 't' years, where t is the smallest prime number.

a. Rs.9000

b. Rs.7000

c. Rs.8000

d. Rs.6000

e. Can't be determined

18. Questions

The cost price of article A is Rs.'P', if the article is sold at a profit of X% instead of X% loss, then Rs.P/2 is obtained more. If the cost price of article B is Rs.6000 and it is sold at a profit of X%, then find the selling price of article B.

a. Rs.1200

b. Rs.7500

c. Rs.6500

d. Rs.7800

e. Rs.7000

19. Questions

The time taken by pipe A to fill a tank is 20 hours, with the help of pipe B, it can fill a tank in 10 hours. If A, B and C fill the same tank in 15 hours, then find the time taken by pipe C alone to empty 1/5th of the tank. C is an outlet pipe.

a. 6 hr

b. 8 hr

c. 10 hr

d. 12 hr

e. 11 hr

20. Questions

The total investment of Ramesh, Rishi and Ritu in a business together is Rs.5200. The investment of Ramesh is Rs.1200 more than that of Rishi and the investment of Rishi is Rs.500 more than that of Ritu. If the time period for which they invested is 4 months,2 months and 3 months respectively. Find the ratio of their profit.

a. 19:5:5

b. 11:5:5

c. 12:5:5

d. 18:5:5

e. 17:5:5

21. Questions

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

95% of 120 + 135% of 280 = ?

a. 496

b. 492

c. 488

d. 484

e. 502

22. Questions

√324 * 15 – 3705 ÷ √361 = ? * 5

a. 12

b. 14

c. 13

d. 15

e. 18

23. Questions

35 * 18 + 22 * 19 = ? + 33 * 17

a. 467

b. 474

c. 469

d. 487

e. 483

24. Questions

6552÷ 21 + √1444 = ? * 7

a. 45

b. 50

c. 55

d. 60

e. 65

25. Questions

65% of 540 – √529 * 10 = $?^2$

a. 11

b. 17

c. 13

d. 15

e. 18

26. Questions

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

$64^{4.8}*1.99^4/16.12^5=2^?/3.98^{-3.8}$

a. 7

b. 6

c. 9

d. 8

e. 5

27. Questions

30.32% of 399.98+?^{2}=75.24% of 459.88

a. 21

b. 32

c. 15

d. 9

e. 24

28. Questions

124.91% of 519.902 + 23.12 * 39.98 = ?

a. 1570

b. 1580

c. 1590

d. 1560

e. 1610

29. Questions

45.01% of 599.89 ÷ [(24.89 + 15.32)% of 500.21] = ? ÷ 40.11

a. 58

b. 59

c. 54

d. 34

e. None of these

30. Questions

479.999 + 233.019 –99.99 + 1424.788 – 678.898 = ? – 23.99

a. 1440

b. 1380

c. 1240

d. 1020

e. 880

31. Questions

Find out the missing number in the following number series.

24, 33, 49, 74, 110, ?

a. 148

b. 151

c. 159

d. 165

e. 143

32. Questions

9, 20, 44, 83, ?, 214

a. 139

b. 141

c. 137

d. 145

e. 147

33. Questions

13, 103, 176, ?, 279, 313

a. 228

b. 234

c. 238

d. 242

e. 248

34. Questions

20, 35, 55, 80, ?, 145

a. 100

b. 105

c. 110

d. 115

e. 120

35. Questions

17, 137, 161, ?, 169, 170

a. 167

b. 158

c. 147

d. 165

e. 153

36. Questions

Find out the wrong number in the following number series.

376, 427, 374, 429, 402, 431

a. 376

b. 427

c. 374

d. 429

e. 402

37. Questions

72, 75, 84, 125, 192, 435

a. 72

b. 75

c. 84

d. 125

e. 435

38. Questions

96, 48, 49, 72, 144, 360

a. 96

b. 48

c. 49

d. 144

e. 360

39. Questions

480, 120, 240, 60, 120, 90

a. 480

b. 120

c. 240

d. 60

e. 90

40. Questions

729, 717, 681, 627, 537, 429

a. 729

b. 717

c. 681

d. 627

e. 429

41. Questions

In each of the following questions, two equations are given. You have to solve both the equations to find the relation between x and y.

I). $x^2-x-132=0$

II). $y^2-30y+216=0$

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). $x^2+28x+195=0$

II). $y^2-8y-240=0$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

43. Questions

I). $x^2+16x-225=0$

II). $3y^2-y-80=0$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

44. Questions

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

II). $y^2 - y - 6 = 0$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

45. Questions

I). $x^2 - 10x - 24 = 0$

II). $y^2 + 21y + 38 = 0$

a. x > y

b. x ≥ y

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

d. x < y

e. $x \leq y$

Explanations:

1. Questions

Days	Number of people arrived	Number of people departed
Monday	760	1080
Tuesday	1040	320
Wednesday	640	800
Thursday	440	880
Friday	520	400

Answer: B

Total number of females who departed on Monday=3/5*1080=648

Number of females who arrived on Tuesday=1040*80/100=832

Required answer=832+648=1480

2. Questions

Days	Number of people arrived	Number of people departed
Monday	760	1080
Tuesday	1040	320
Wednesday	640	800
Thursday	440	880
Friday	520	400

Answer: C

S+100=760-640

S+100=120

S=20

T+200=1680

T=1480

Required answer=(1480+20)/2=750

3. Questions

Days	Number of people arrived	Number of people departed
Monday	760	1080
Tuesday	1040	320
Wednesday	640	800
Thursday	440	880
Friday	520	400

Answer: C

Number of people who arrived through Vistara Airlines on Tuesday=120/100*640=768

Number of females who arrived through Vistara Airlines on Tuesday =768/3*2=512

Required answer=512

4. Questions

Days	Number of people arrived	Number of people departed
Monday	760	1080
Tuesday	1040	320
Wednesday	640	800
Thursday	440	880
Friday	520	400

Answer: C

Number of people who arrived through Indigo Airlines on Monday and Tuesday=760+1040=1800

Number of people who departed through Indigo Airlines on Wednesday and Friday=800+400=1200

Required ratio=1800:1200=3:2

5. Questions

Days	Number of people arrived	Number of people departed
Monday	760	1080
Tuesday	1040	320
Wednesday	640	800
Thursday	440	880
Friday	520	400

Answer: C

Number of people who departed above 50 years =800*50/100=400

Required percentage=400/1440*100=27.77%

6. Questions

Let, the number of boys who like Badminton=10x

Number of girls who like Cricket=13x

Let, the total number of students who like Kabaddi=100x

Boys who like Kabaddi=20x

Girls who like kabaddi=80x

Girls who like Badminton=2y

Boys who like Cricket=3y

According to the question,

3y+80x=220---(1)

3y+13x=86---(2)

67x=134

x=2

y=220-160=60/3 =20

Sports	Boys	Girls	Total number of Students
Cricket	60	26	86
Badminton	20	40	60
Kabaddi	40	160	200

Answer: D

Number of boys who like tennis=120/100*60=72

Required ratio=72:26=36:13

7. Questions

Let, the number of boys who like Badminton=10x

Number of girls who like Cricket=13x

Let, the total number of students who like Kabaddi=100x

Boys who like Kabaddi=20x

Girls who like kabaddi=80x

Girls who like Badminton=2y

Boys who like Cricket=3y

According to the question,

3y+80x=220---(1)

3y+13x=86---(2)

67x=134

x=2

y=220-160=60/3 =20

Sports	Boys	Girls	Total number of Students
Cricket	60	26	86
Badminton	20	40	60
Kabaddi	40	160	200

Answer: A

Number of girls who like badminton=40

The average number of girls who like badminton and Kabaddi=200/2=100

Required percentage=40/100*100=40%

8. Questions

Let, the number of boys who like Badminton=10x

Number of girls who like Cricket=13x

Let, the total number of students who like Kabaddi=100x

Boys who like Kabaddi=20x

Girls who like kabaddi=80x

Girls who like Badminton=2y

Boys who like Cricket=3y

According to the question,

3y+80x=220---(1)

3y+13x=86---(2)

67x=134

x=2

y=220-160=60/3 =20

Sports	Boys	Girls	Total number of Students
Cricket	60	26	86
Badminton	20	40	60
Kabaddi	40	160	200

Answer: B

Average number of students who like badminton=60/2=30

Average number of students who like Kabaddi=200/2=100

Required difference=100-30=70

9. Questions

Let, the number of boys who like Badminton=10x

Number of girls who like Cricket=13x

Let, the total number of students who like Kabaddi=100x

Boys who like Kabaddi=20x

Girls who like kabaddi=80x

Girls who like Badminton=2y

Boys who like Cricket=3y

According to the question,

3y+80x=220---(1)

3y+13x=86---(2)

67x=134

x=2

y=220-160=60/3 =20

Sports	Boys	Girls	Total number of Students
Cricket	60	26	86
Badminton	20	40	60
Kabaddi	40	160	200

Answer: B

Boys who like kabaddi in 2023=40*80/100=32

Number of girls who like Kabaddi in 2023=160*140/100=224

Required difference=256-200=56 more

10. Questions

Let, the number of boys who like Badminton=10x

Number of girls who like Cricket=13x

Let, the total number of students who like Kabaddi=100x

Boys who like Kabaddi=20x

Girls who like kabaddi=80x

Girls who like Badminton=2y

Boys who like Cricket=3y

According to the question,

3y+80x=220---(1)

3y+13x=86---(2)

67x=134

x=2

y=220-160=60/3 =20

Sports	Boys	Girls	Total number of Students
Cricket	60	26	86
Badminton	20	40	60
Kabaddi	40	160	200

Answer: C

Number of girls who like Kabaddi and badminton=200

X+Y=200

X-Y=40

Y=(200-40)/2=80

Required answer=80

11. Questions

Answer: C

Let, the income of Ramesh=6x

Income of Somesh=5x

According to the question,

{6x*(100+P/100)}/{5x*(110+P)/100)}=39/35

2(100+P)/(110+P)=13/7

1400+14P=1430+13P

P=30

Required answer=30+10=40

12. Questions

Answer: C

According to the question,

Milk/Water=7x+12/4x-6=3/1

12x-18=7x+12

5x=30

x=6

Required answer=6*4=24 litres

13. Questions

Answer: D

According to the question,

Length of the rectangle=6x

Breadth of the rectangle=5x

According to the question,

(6x+5x)*2=220

11x=110

x=10

Length of the rectangle=60cm

Breadth of the rectangle=50cm

Radius of the cylinder=63cm

Height of the cylinder=50*120/100=60cm

Volume of the cylinder=(22/7*63*63*60)*1/6=124740 cm^2

14. Questions

Answer: B

Let, the speed of the boat=6p

Speed of the stream=5p

According to the question,

(Z+10)/p=55---(1)

(Z+120)/11p=10---(2)

55P-10=110P-120

110=55P

P=2

Z+10=110

Required answer=110 km

15. Questions

Answer: B

Ratio of the present age of B:D=13:10

Present age of C to A=4:5

Combined age ratio of all four =A:B:C:D=10:13:8:10

According to the question,

5x=15

x=3

Required answer=30 years

16. Questions

Answer: A

According to the question,

Let, the length of Rajdhani express='x' m

Speed of shatabdi express= 1200/30=40

Speed of rajdhani express= 40

37.5*40=1500

X=1500

S=300/1200*100=25%

Required answer=35

17. Questions

Answer: E

According to the question,

Let, 'y' be the simple interest received from scheme B

Scheme A,

$CI=P(1+R/100)^n - P$

$22/15*y=x(1+20/100)^2 - x$

Scheme B,

Y=x*2*30/100

Here we can't find the exact value of X, we need more data to find the exact answer.

So, data can't be determined

18. Questions

Answer: B

According to the question,

(P*100+x/100)-(P*100-x/100)=P/2

2px=p*50

x=25%

Selling price of article B=6000*125/100=Rs.7,500

Required answer=Rs.7500

19. Questions

Answer: A

Time taken by pipe A to fill the tank=20 hours

Time taken by pipes A and B to fill the tank=10 hours

Time taken by pipes A, B and C to fill the tank=15 hours

Total efficiency=60 units

Efficiency of pipe A=3 units/hour

Efficiency of pipe B=6-3=3 units/hour

Efficiency of pipe C=4-6= -2 units/hour (outlet pipe)

(60*1/5)/2 = 6 hours

Required answer = 6 hr

20. Questions

Answer: D

Let, the investment of Ritu=Rs.x

Investment of Rishi= Rs.(x+500)

Investment of Ramesh= Rs.(x+1700)

X+x+500+x+1700=5200

3x=5200-2200

3x=3000

x=1000

Investment ratio=(2700*4):(1500*2):(1000*3)=18:5:5

21. Questions

Answer: B

95% of 120 + 135% of 280 = ?

114 + 378 = ?

? = 492

22. Questions

Answer: D

√324 * 15 – 3705 ÷ √361 = ? * 5

270 – 195 = ? * 5

? = 15

23. Questions

Answer: D

35 * 18 + 22 * 19 = ? + 33 * 17

1048 – 561 = ?

? = 487

24. Questions

Answer: B

6552÷ 21 + √1444 = ? * 7

312 + 38 = ? * 7

? = 50

25. Questions

Answer: A

65% of 540 – √529 * 10 = $?^2$

351 – 230 = $?^2$

? = 11

26. Questions

Answer: B

$64^{4.8}*1.99^{4}/16.12^{5}=2^{?}/3.98^{-3.8}$

$(64/16)^5*2^4=2^?/4^{-4}$

$4^5*2^4/4^4=2^?$

$2^?=64$

$2^?=2^6$

?=6

27. Questions

Answer: C

30.32% of 399.98+$?^2$= 75.24% of 459.88

30*400/100+$?^2$=75*460/100

$?^2$=345-120

$?^2$=225

?=15

28. Questions

Answer: A

124.91% of 519.902 + 23.12 * 39.98 = ?

650 + 920 = ?

? = 1570

29. Questions

Answer: C

45.01% of 599.89 ÷ [(24.89 + 15.32)% of 500.21] = ? ÷ 40.11

45% of 600 ÷ [(25+ 15)% of 500] = ? ÷ 40

45*6 ÷ (40% of 500) =?/40

270*40/200 = 54

30. Questions

Answer: B

479.999 + 233.019 – 99.99 + 1424.788 – 678.898 = ? – 23.99

=> 480 + 230 – 100 + 1425 – 679 + 24 = ?

=> 1380 = ?

31. Questions

Answer: C

$24 + 3^2 = 33$

$33 + 4^2 = 49$

$49 + 5^2 = 74$

$74 + 6^2 = 110$

$110 + 7^2 =$ **159**

32. Questions

Answer: A

$9 + 11 * 1 = 20$

$20 + 12 * 2 = 44$

$44 + 13 * 3 = 83$

$83 + 14 * 4 =$ **139**

$139 + 15 * 5 = 214$

33. Questions

Answer: B

$13 + 9^2 + 9 = 103$

$103 + 8^2 + 9 = 176$

$176 + 7^2 + 9 =$ **234**

$234 + 6^2 + 9 = 279$

$279 + 5^2 + 9 = 313$

34. Questions

Answer: C

$20 + 15 = 35$

$35 + 20 = 55$

$55 + 25 = 80$

$80 + 30 =$ **110**

$110 + 35 = 145$

35. Questions

Answer: A

17 + 5! = 137

137 + 4! = 161

161 + 3! = **167**

167 + 2! = 169

169 + 1! = 170

36. Questions

Answer: E

376+51=427

427-53=374

374+55=429

429-57=**372**

372+59=431

37. Questions

Answer: D

$72+3^1=75$

$75+3^2=84$

$84+3^3=$**111**

$111+3^4=192$

$192+3^5=435$

38. Questions

Answer: C

96*0.5=48

48*1=**48**

48*1.5=72

72*2=144

144*2.5=360

39. Questions

Answer: E

480/4=120

120*2=240

240/4=60

60*2=120

120/4=**30**

40. Questions

Answer: D

729-12*1=717

717-12*3=681

681-12*5=**621**

621-12*7=537

537-12*9=429

41. Questions

Answer: E

x^2-x-132=0

x^2+11x-12x-132=0

x(x+11)-12(x+11)=0

x=-11, +12

y^2-30y+216=0

y^2-12y-18y+216=0

y(y-12)-18(y-12)=0

y=+12, +18

Hence, x ≤ y

42. Questions

Answer: D

x^2+28x+195=0

x^2+13x+15x+195=0

x(x+13)+15(x+13)=0

x=-13, -15

y^2-8y-240=0

y^2-20y+12y-240=0

$y(y-20)+12(y-20)=0$

$y=+20, -12$

Hence, $x < y$

43. Questions

Answer: C

$x^2+16x-225=0$

$x^2-9x+25x-225=0$

$x(x-9)+25(x-9)=0$

$x=+9, -25$

$3y^2-y-80=0$

$3y^2+15y-16y-80=0$

$3y(y+5)-16(y+5)=0$

$y=-5, +16/3$

$y=-5, +5.33$

Relationship can't be determined

44. Questions

Answer: E

$x^2 + 11x + 18 = 0$

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

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

$x = -9, -2$

$y^2 - y – 6 = 0$

$y^2 – 3y + 2y – 6 = 0$

$y(y – 3) + 2(y – 3) = 0$

$y = 3, -2$

$x \leq y$

45. Questions

Answer: B

$x^2 – 10x - 24 = 0$

$x^2 - 12x + 2x - 24 = 0$

$x(x - 12) + 2(x - 12) = 0$

$x = 12, -2$

$y^2 + 21y + 38 = 0$

$y^2 + 19y + 2y + 38 = 0$

$y(y + 19) + 2(y + 19) = 0$

$y = -19, -2$

$x \geq y$