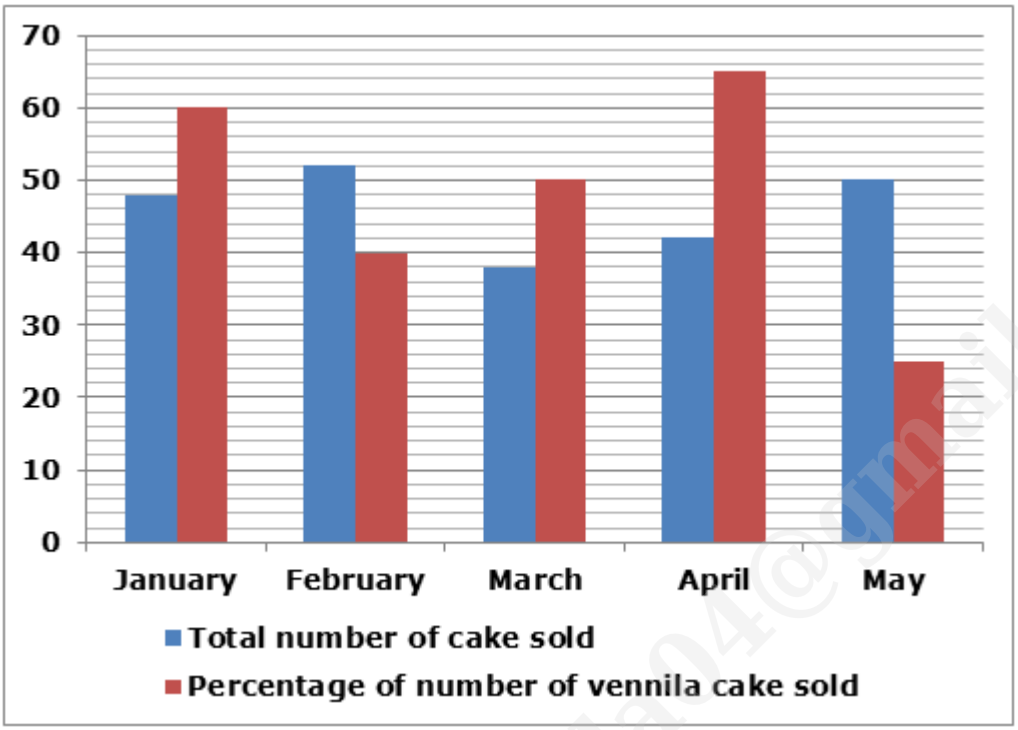
1. Questions

Study the given information carefully and answer the following questions.

The bar graph given below shows the total number of cakes sold in tens (vanilla + chocolate) and the percentage distribution of the number of vanilla cakes sold in five different months namely, January, February, March, April, and May, respectively.



The ratio of the number of vanilla to strawberry cakes sold in March is 2:3. The number of strawberry cakes sold in April is 2/3 more than that in March. Find the total number of vanilla and strawberry cakes sold in April.

a. 755

b. 748

c. 640

d. 579

e. 488

2. Questions

The number of chocolate cakes sold in April and June together is 25% more than that in January. The ratio of the number of chocolate to vanilla cakes sold in June is 3:5. Find the total number of vanilla cakes sold in June.

a. 160

b. 155

c. 214

d. 255

e. 165

3. Questions

The number of vanilla cakes sold in July is the difference between the total number of cakes sold in March and the number of chocolate cakes sold in February. If the ratio of the number of vanilla to chocolates cakes sold in July is 17:13, then find the number of chocolate cakes sold in July.

a. 65

b. 72

c. 52

d. 45

e. 90

4. Questions

Find the ratio between the number of chocolate cakes sold in May to January.

a. 125: 64

b. 64: 125

c. 54: 125

d. 77: 131

e. 111: 19

5. Questions

In April, 20% of the cakes are sold online, and the rest are sold offline. The number of chocolate cakes sold online is 24. Find the number of vanilla cakes sold offline.

a. 213

b. 245

c. 147

d. 78

e. 200

6. Questions

Study the given information carefully and answer the following questions.

The table chart given below shows the total number of pipes manufactured (A and B) and the ratio of the number of type A to type B pipes manufactured on five different days namely, Monday, Tuesday, Wednesday, Thursday, and Friday, respectively.

Days	Total number of pipes manufactured	Ratio of type A to type B pipes manufactured
Monday	280	3:4
Tuesday	320	11:5
Wednesday	250	12:13
Thursday	450	5:4
Friday	300	1:5

Out of the number of type B pipes manufactured on Monday, 45% are PVC, and the rest are brass pipes. If 25% of the brass pipes are sold for Rs. 120, then find the selling price of 25% of the brass pipes.

a. Rs. 2640

b. Rs. 3240

c. Rs. 1890

d. Rs. 2400

e. Rs. 2590

7. Questions

On Tuesday, the ratio of the number of pipes sold to those unsold was 9:7. The number of type A pipes sold is 240 less than the total number of pipes manufactured on Tuesday. Find the number of type B pipes unsold.

a. 20

b. 0

c. 60

d. 40

e. 30

8. Questions

Find the sum of the number of type A pipes manufactured on Friday and the number of type B pipes manufactured on Tuesday.

a. 260

b. 150

c. 130

d. 90

e. 70

9. Questions

The total number of pipes manufactured on Friday is what percentage of the number of type A pipes manufactured on Wednesday?

a. 225%

b. 250%

c. 180%

d. 170%

e. 200%

10. Questions

On Saturday, the number of type A pipes manufactured was the same as that on Tuesday, and the number of type B pipes manufactured was 90% of the type A pipes manufactured on Monday. Find the total number of pipes manufactured on Saturday.

a. 210

b. 220

c. 328

d. 198

e. 179

11. Questions

Container A contains 50 litres of milk and the rest is water. Container B contains 40 litres of water and the rest is milk. The total quantity of mixture in container A is 25 litres less than that in B. Find the difference between the quantity of milk in container B and the quantity of water in container A.

a. 50 litres

b. 35 litres

c. 25 litres

d. 20 litres

e. 45 litres

12. Questions

Rs. 1500 is invested at 20% p.a. in simple interest for 8 years. 75% of the interest received is then invested at y% p.a. in compound interest, compounded annually for 2 years, such that the amount received is Rs. 2178. Find the value of y.

a. 24

b. 10

c. 15

d. 12

e. 18

13. Questions

The speed of a boat in still water is 8 km/h more than that of the stream. The time taken by the boat to cover 180 km downstream is 4.5 hours less than the time taken by the boat to cover 76 km upstream. Find the time taken by the boat to cover 1152 km downstream.

a. 35 hours

b. 28 hours

c. 32 hours

d. 42 hours

e. 25 hours

14. Questions

A and B together can complete a piece of work in 55 days, while B and C together can complete the same work in 60 days. If A and B started the work and worked on it for 26 days, then B and C worked on it for 12 days, and C completed the remaining work in 36 days, then find the time taken by A alone to complete 70% of the whole work.

a. 66 days

b. 56 days

c. 47 days

d. 77 days

e. 80 days

15. Questions

The ratio of the present age of A to B is 6:7. The ratio of A's age after 8 years to B's age after 6 years is 10:11. C's age before 7 years is equal to the present age of A. The ratio of the present age of C to D is 7:9. Find the present age of D.

a. 65 years

b. 45 years

c. 67 years

d. 63 years

e. 49 years

16. Questions

The marked price of the pillow is 20% above the cost price and sold after two successive discounts of Rs. 10 and Rs. x, respectively. The marked price of the table is Rs. 240, and it is sold at a discount of 25%. If the selling price of both articles is Rs. 380 and the cost price of the pillow is Rs. 20 more than the selling price of the table, then find the value of x.

a. 35

b. 40

c. 30

d. 20

e. 50

17. Questions

A, B, and C entered into a partnership by investing Rs. 2300, Rs. 2500, and Rs. 1000, respectively. After 4 months, A withdrew his investment, and C doubled his investment. After 1 year, the profit share of B is Rs. 15000. Find the profit share of A.

a. Rs. 4600

b. Rs. 6700

c. Rs. 11000

d. Rs. 10000

e. Rs. 13400

18. Questions

The numerical value of the perimeter of a rectangle is the same as the numerical value of the area of a square of side 6 cm. If the length of the rectangle is 25% more than its breadth, then find the area of the rectangle.

a. 55 cm^2

b. 80 cm^2

c. 60 cm^2

d. 70 cm^2

e. 75 cm^2

19. Questions

In an election between two candidates, namely A and B, only 90% of the total number of votes were cast. If candidate A got 60% of the total votes cast and won by 3600 votes, then find the number of

voters who did not cast their votes.

a. 1200

b. 1300

c. 800

d. 2000

e. 2200

20. Questions

The income of Ram is 20% less than that of Ravi. The savings of Ravi are Rs. 24000, which is 25% more than his expenditure. The ratio of the expenditure between Ravi and Ram is 4:5. Find the savings of Ram.

a. Rs. 10560

b. Rs. 11450

c. Rs. 12480

d. Rs. 9800

e. Rs. 19000

21. Questions

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

40% of 20^2 + 7 * ? + 3 * 18 = 228

a. 5

b. 2

c. 3

d. 9

e. 7

22. Questions

(880/(?+3)) – 60% of (3/4) of 480 = 4

a. 2

b. 1

c. 5

d. 7

e. 3

23. Questions

(4/9) of (3/16) of 660 + √121 = ? * 6

a. 28

b. 11

c. 20

d. 12

e. 15

24. Questions

45% of 720 + 32% of 1200 = ? * 3

a. 245

b. 236

c. 334

d. 356

e. 190

25. Questions

√361 + 4/15 of 240 = $?^2$ – 61

a. 11

b. 19

c. 21

d. 12

e. 9

26. Questions

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

19.89% of ? + √483.94 = 25% of 160.03

a. 85

b. 90

c. 120

d. 75

e. 70

27. Questions

$(12.96 + 6.99) / 3.966 + ? = 11^3$

a. 1376

b. 1326

c. 1289

d. 1320

e. 1255

28. Questions

$(12.09)^2 * 5.98 / 26.95 = ? + 25$

a. 9

b. 11

c. 15

d. 7

e. 3

29. Questions

$?\%$ of $649.82 = 13.98^2 + 18 * 3.02 - 54.86$

a. 35

b. 44

c. 60

d. 30

e. 20

30. Questions

$(16.85 + 8.98 * 9.01) = 7^2 * ?$

a. 2

b. 4

c. 9

d. 1

e. 5

31. Questions

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

24, 48, 88, 144, ?

a. 195

b. 216

c. 200

d. 214

e. 160

32. Questions

4, 10, 20, 50, ?

a. 80

b. 100

c. 120

d. 60

e. 65

33. Questions

35, 57, 90, 134, ?

a. 211

b. 189

c. 200

d. 170

e. 165

34. Questions

92, 88, 79, ?, 38

a. 63

b. 78

c. 50

d. 55

e. 65

35. Questions

61, 79, 106, 142, ?

a. 187

b. 177

c. 154

d. 160

e. 195

36. Questions

Find out the wrong number in the following number series.

132, 145, 160, 181, 204

a. 160

b. 145

c. 204

d. 132

e. 181

37. Questions

56, 42, 30, 24, 12

a. 30

b. 24

c. 12

d. 56

e. 42

38. Questions

130, 222, 345, 520, 738

a. 222

b. 345

c. 520

d. 738

e. 130

39. Questions

5, 26, 68, 131, 218

a. 218

b. 68

c. 131

d. 26

e. 5

40. Questions

640, 320, 160, 80, 45

a. 80

b. 45

c. 160

d. 640

e. 320

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). $x^2 - 3x - 180 = 0$

ii). $y^2 + 23y + 132 = 0$

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). $x^2 + 14x + 45 = 0$

ii). $y^2 + 19y + 90 = 0$

a. $x > y$

b. $x \geq y$

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

d. x ≤ y

43. Questions

i). $x^2 + 29x + 198 = 0$

ii). $5y^2 - 27y + 180 = 0$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

44. Questions

i). $x^2 + 18x + 80 = 0$

ii). $9y^2 + 144 = 720$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

45. Questions

i). $x^2 - 12x + 35 = 0$

ii). $y^2 - 9y + 20 = 0$

a. x ≥ y

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

c. x < y

d. x ≤ y

Explanations:

1. Questions

The total number of cakes sold in January = 480

The number of vanilla cakes sold in January = 480 * 60/100 = 288

The number of chocolate cakes sold in January = 480 * 40/100 = 192

Similarly,

Month	The total number of cakes sold	The number of vanilla cakes sold	The number of chocolate cakes sold
January	480	288	192
February	520	208	312
March	380	190	190
April	420	273	147
May	500	125	375

Answer: B

The number of strawberry cakes sold in March = 190 * 3/2 = 285

The number of strawberry cakes sold in April = 285 * 2/3 + 285 = 475

Required sum = (475 + 273) = 748

2. Questions

The total number of cakes sold in January = 480

The number of vanilla cakes sold in January = 480 * 60/100 = 288

The number of chocolate cakes sold in January = 480 * 40/100 = 192

Similarly,

Month	The total number of cakes sold	The number of vanilla cakes sold	The number of chocolate cakes sold
January	480	288	192
February	520	208	312
March	380	190	190
April	420	273	147
May	500	125	375

Answer: B

The number of chocolate cakes sold in April and June = 192 * 125/100 = 240

The number of chocolate cakes sold in April = 147

The number of chocolate cakes sold in June = 240 – 147 = 93

The number of vanilla cakes sold in June = 93 * 5/3 = 155

3. Questions

The total number of cakes sold in January = 480

The number of vanilla cakes sold in January = 480 * 60/100 = 288

The number of chocolate cakes sold in January = 480 * 40/100 = 192

Similarly,

Month	The total number of cakes sold	The number of vanilla cakes sold	The number of chocolate cakes sold
January	480	288	192
February	520	208	312
March	380	190	190
April	420	273	147
May	500	125	375

Answer: C

The total number of cakes sold in March = 380

The number of chocolate cakes sold in February = 312

The number of vanilla cakes sold in July = 380 – 312 = 68

Number of chocolate cakes sold in July = 68 * 13/17 = 52

4. Questions

The total number of cakes sold in January = 480

The number of vanilla cakes sold in January = 480 * 60/100 = 288

The number of chocolate cakes sold in January = 480 * 40/100 = 192

Similarly,

Month	The total number of cakes sold	The number of vanilla cakes sold	The number of chocolate cakes sold
January	480	288	192
February	520	208	312
March	380	190	190
April	420	273	147
May	500	125	375

Answer: A

The number of chocolate cakes sold in May = 375

The number of chocolate cakes sold in January = 192

Required ratio = 375: 192 = 125: 64

5. Questions

The total number of cakes sold in January = 480

The number of vanilla cakes sold in January = 480 * 60/100 = 288

The number of chocolate cakes sold in January = 480 * 40/100 = 192

Similarly,

Month	The total number of cakes sold	The number of vanilla cakes sold	The number of chocolate cakes sold
January	480	288	192
February	520	208	312
March	380	190	190
April	420	273	147
May	500	125	375

Answer: A

The total number of cakes sold in April = 420

The number of cakes sold online in April = 420 * 20/100 = 84

The number of cakes sold offline in April = 420 – 84 = 336

The number of chocolate cakes sold online in April = 24

The number of vanilla cakes sold online in April = 84 – 24 = 60

The number of vanilla cakes sold offline in April = 273 – 60 = 213

6. Questions

The total number of pipes manufactured on Monday = 280

The number of type A pipes manufactured on Monday = 280 * 3/7 = 120

The number of type B pipes manufactured on Monday = 280 * 4/7 = 160

Similarly,

Days	The total number of pipes manufactured	The number of type A pipes manufactured	The number of type B pipes manufactured
Monday	280	120	160
Tuesday	320	220	100
Wednesday	250	120	130
Thursday	450	250	200
Friday	300	50	250

Answer: A

The number of type B pipes manufactured on Monday = 160

The number of PVC pipes manufactured on Monday = 160 * 45/100 = 72

The number of Brass pipes manufactured on Monday = 160 – 72 = 88

Revenue generated for 25% Brass pipes = 88 * 25/100 = 22 * 120 = Rs. 2640

7. Questions

The total number of pipes manufactured on Monday = 280

The number of type A pipes manufactured on Monday = 280 * 3/7 = 120

The number of type B pipes manufactured on Monday = 280 * 4/7 = 160

Similarly,

Days	The total number of pipes manufactured	The number of type A pipes manufactured	The number of type B pipes manufactured
Monday	280	120	160
Tuesday	320	220	100
Wednesday	250	120	130
Thursday	450	250	200
Friday	300	50	250

Answer: B

The total number of pipes manufactured on Tuesday = 320

The number of pipes sold on Tuesday = 320 * 9/16 = 180

The number of type A pipes sold on Tuesday = 320 – 240 = 80

The number of type B pipes sold on Tuesday = 180 – 80 = 100

The number of type B pipes unsold on Tuesday = 100 – 100 = 0

8. Questions

The total number of pipes manufactured on Monday = 280

The number of type A pipes manufactured on Monday = 280 * 3/7 = 120

The number of type B pipes manufactured on Monday = 280 * 4/7 = 160

Similarly,

Days	The total number of pipes manufactured	The number of type A pipes manufactured	The number of type B pipes manufactured
Monday	280	120	160
Tuesday	320	220	100
Wednesday	250	120	130
Thursday	450	250	200
Friday	300	50	250

Answer: B

The number of type A pipes manufactured on Friday = 50

The number of type B pipes manufactured on Tuesday = 100

Required sum = 50 + 100 = 150

9. Questions

The total number of pipes manufactured on Monday = 280

The number of type A pipes manufactured on Monday = 280 * 3/7 = 120

The number of type B pipes manufactured on Monday = 280 * 4/7 = 160

Similarly,

Days	The total number of pipes manufactured	The number of type A pipes manufactured	The number of type B pipes manufactured
Monday	280	120	160
Tuesday	320	220	100
Wednesday	250	120	130
Thursday	450	250	200
Friday	300	50	250

Answer: B

The total number of pipes manufactured on Friday = 300

The number of type A pipes manufactured on Wednesday = 120

Required percentage = 300/120 * 100 = 250%

10. Questions

The total number of pipes manufactured on Monday = 280

The number of type A pipes manufactured on Monday = 280 * 3/7 = 120

The number of type B pipes manufactured on Monday = 280 * 4/7 = 160

Similarly,

Days	The total number of pipes manufactured	The number of type A pipes manufactured	The number of type B pipes manufactured
Monday	280	120	160
Tuesday	320	220	100
Wednesday	250	120	130
Thursday	450	250	200
Friday	300	50	250

Answer: C

The number of type A pipes manufactured on Saturday = 220

The number of type B pipes manufactured on Saturday = 120 * 90/100 = 108

Required sum = 108 + 220 = 328

11. Questions

Answer: B

According to the question,

Let, the total quantity of mixture in container A = x litres

Therefore, the total quantity of mixture in container B = (x+25) litres

The quantity of water in container A = (x -50) litres

The quantity of milk in container B = (x +25 -40) = (x-15) litres

Required difference = (x -15) – (x -50) = 35 litres

12. Questions

Answer: B

According to the question,

Interest received at 20% p.a simple interest = (1500 * 20 * 8)/100

= Rs. 2400

$0.75 * 2400(1+y/100)^2 = 2178$

$(1+y/100)^2 = 2178/1800$

$1 + y/100 = 33/30$

$y/100 = 1/10$

y = 10

13. Questions

Answer: C

According to the question,

Let, the speed of the boat in still water = x km/hr

The speed of the current = (x -8) km/hr

The upstream speed = x –x + 8 = 8 km/hr

The downstream speed = 2x -8 km/hr

(76/8) – (180/(2x -8)) = 4.5

2x - 8 = 180/5 = 36

The downstream speed = 36 km/hr

Time taken = 1152/36 = 32 hours

14. Questions

Answer: A

According to the question,

The total work = 660 units

The amount of work done by A and B together in one day = 660/55 = 12 units

The amount of work done by B and C together in one day = 660/60 = 11 units

The amount of work done by A and B together in 26 days = 26 * 12 = 312 units

The amount of work done by B and C together in 12 days = 12 * 11 = 132 units

The efficiency of C = (660 -312 -132)/36 = 6 units/day

The efficiency of B = 11 – 6 = 5 units/day

The efficiency of A = 12 – 5 = 7 units/day

Required time = (0.70 * 660)/7 = 66 days

15. Questions

Answer: D

According to the question,

Let, the present age of A = 6x

The present age of B = 7x

(6x +8)/(7x +6) = 10/11

66x + 88 = 70x +60

4x = 28

x = 7

The present age of A = 6 * 7 = 42 years

The present age of B = 7 * 7 = 49 years

C -7 = 42

C = 49

The present age of D = 49 * 9/7 = 63 years

16. Questions

Answer: C

According to the question,

The cost price of the table = Rs. 240

The selling price of the table = 240 * 75/100 = Rs. 180

The selling price of the pillow = 380 – 180 = Rs. 200

The cost price of the pillow = 180 + 20 = Rs. 200

Mp = 200 * 120/100 = Rs. 240

200 = 240 – 10 –x

200 = 230 – x

x = 30

17. Questions

Answer: A

According to the question,

The profit share of A, B, and C = (2300 * 4) : (2500 * 12) : (1000 * 4 + 2000 * 8)

= 9200: 30000: 20000

= 92: 300: 200

= 23: 75: 50

The profit share of B = Rs. 15000

The profit share of A = 15000 * 23/75 = Rs. 4600

18. Questions

Answer: B

According to the question,

Let, the breadth of the rectangle = 8x cm

The length of the rectangle = 8x * 1.25 = 10x cm

$6^2 = 2 * (10x + 8x)$

$36 = 2 * 18x$

$36x = 36$

$x = 1$

The required area = $10x * 8x = 80x^2 = 80\ cm^2$

19. Questions

Answer: D

According to the question,

Let, the total number of votes = 100x

The number of voters who cast their votes = 100x * 0.9 = 90x

The number of votes received by candidate A = 90x * 0.6 = 54x

The number of votes received by candidate B = 90x – 54x = 36x

54x – 36x = 3600

18x = 3600

x = 200

The total number of votes = 100x = 100 * 200 = 20000

The number of voters who did not cast their votes = 0.1 * 20000 = 2000

20. Questions

Answer: A

According to the question,

The savings of Ravi = Rs. 24000

The expenditure of Ravi = 24000 * 100/125 = Rs. 19200

Income of Ravi = 24000 + 19200 = Rs. 43200

Income of Ram = 43200 * 80/100 = Rs. 34560

The Expenditure of Ram = 19200 * 5/4 = Rs. 24000

The savings of Ram = 34560 – 24000 = Rs. 10560

21. Questions

Answer: B

40% of 20^2 + 7 * ? + 3 * 18 = 228

(40/100) * 400 + 7 * ? + 54 = 228

160 + 7 * ? + 54 = 228

214 + 7 * ? = 228

7 * ? = 228 – 214

7 * ? = 14

? = 2

22. Questions

Answer: B

(880/(?+3)) – 60% of (3/4) of 480 = 4

880/(?+3) – 216 = 4

880/(?+3) = 220

?+3 = 4

? = 1

23. Questions

Answer: B

(4/9) of (3/16) of 660 + √121 = ? * 6

55 + 11 = ? * 6

66/6 = ?

? = 11

24. Questions

Answer: B

45% of 720 + 32% of 1200 = ? * 3

324 + 384 = ? * 3

? = 708/3

? = 236

25. Questions

Answer: D

√361 + 4/15 of 240 = $?^2$ – 61

19 + 4/15 * 240 = $?^2$ – 61

19 + 64 + 61 = $?^2$

$?^2 = 144$

$? = 12$

26. Questions

Answer: B

19.89% of ? + √483.94 = 25% of 160.03

20% of ? + √484 = 25% of 160

(20/100) * ? + 22 = 40

? = 18 * (100/20)

? = 90

27. Questions

Answer: B

$(12.96 + 6.99) / 3.966 + ? = 11^3$

(13 +7) / 4 + ? = 1331

20/4 + ? = 1331

5 + ? = 1331

? = 1331 - 5

? = 1326

28. Questions

Answer: D

$(12.09)^2 * 5.98 / 26.95 = ? + 25$

$12^2 * 6 / 27 = ? + 25$

144 * 6 / 27 = ? + 25

32 – 25 = ?

? = 7

29. Questions

Answer: D

$?\%$ of $649.82 = 13.98^2 + 18 * 3.02 – 54.86$

?% of 650 = 196 + 54 – 55

?% of 650 = 195

? = 30

30. Questions

Answer: A

$(16.85 + 8.98 * 9.01) = 7^2 * ?$

$17 + 81 = 49 * ?$

$98 = 49 * ?$

$? = 2$

31. Questions

Answer: B

$24 + 8 * 3 = 48$

$48 + 8 * 5 = 88$

$88 + 8 * 7 = 144$

$144 + 8 * 9 = 216$

32. Questions

Answer: B

$4 * 2.5 = 10$

$10 * 2 = 20$

$20 * 2.5 = 50$

$50 * 2 = 100$

33. Questions

Answer: B

$35 + 11 * 2 = 57$

$57 + 11 * 3 = 90$

$90 + 11 * 4 = 134$

$134 + 11 * 5 = 189$

34. Questions

Answer: A

$92 - 2^2 = 88$

$88 - 3^2 = 79$

$79 - 4^2 = 63$

$63 - 5^2 = 38$

35. Questions

Answer: A

61 + 9 * 2 = 79

79 + 9 * 3 = 106

106 + 9 * 4 = 142

142 + 9 * 5 = 187

36. Questions

Answer: A

132 + 13 = 145

145 + 17 = 162

162 + 19 = 181

181 + 23 = 204

37. Questions

Answer: B

56 – 14 = 42

42 – 12 = 30

30 – 10 = 20

20 – 8 = 12

38. Questions

Answer: B

5^3 + 5 = 130

6^3 + 6 = 222

7^3 + 7 = 350

8^3 + 8 = 520

9^3 + 9 = 738

39. Questions

Answer: A

5 + 21 * 1 = 26

26 + 21 * 2 = 68

68 + 21 * 3 = 131

131 + 21 * 4 = 215

40. Questions

Answer: B

640/2 = 320

320/2 = 160

160/2 = 80

80/2 = 40

41. Questions

Answer: C

x^2 -3x -180 = 0

x^2 + 12x – 15x – 180 = 0

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

x = -12, 15

y^2 + 23y + 132 = 0

y^2 + 11y + 12y + 132 = 0

(y + 11) (y+ 12) = 0

y = -11, -12

Hence, x = y or relationship cannot be determined

42. Questions

Answer: B

x^2 + 14x + 45 = 0

x^2 + 5x + 9x + 45 = 0

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

x = -5, -9

y^2 + 19y + 90 =0

y^2 + 10y + 9y + 90 =0

(y + 9) (y + 10) = 0

y = -9, -10

Hence, x ≥ y

43. Questions

Answer: D

$x^2+29x+198=0$

$x^2+11x+18x+198=0$

$(x+11)(x+18) = 0$

$x = -11, -18$

$5y^2-27y+180=0$

$5y^2 - 12y-15y+180=0$

$(5y-12)(y-15)=0$

$y = 2.4, 3$

Hence, $x < y$

44. Questions

Answer: E

$x^2 +18x +80 =0$

$x^2+ 10x +8x +80 =0$

$(x +8)(x +10) =0$

$x = -8, -10$

$9y^2 + 144 = 720$

$9y^2 = 576$

$y^2 = 64$

$y = 8, -8$

Hence, $y \geq x$

45. Questions

Answer: B

$x^2 -12x +35 = 0$

$x^2 -5x -7x +35 = 0$

$(x -7)(x -5) =0$

$x = 7, 5$

$y^2 - 9y + 20 = 0$

$y^2 - 4y - 5y + 20 = 0$

$(y - 5)(y - 4) = 0$

$y = 5, 4$

Hence, $x \geq y$