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NABARD Grade A Previous Year Paper for 2021

NABARD Grade A Phase 1 Previous Year Questions

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2021:(Q.71 to Q.90)

Q.71) Pipe A can fill a tank in 36 min. Pipe B can fill it in 45 min. Both pipes are opened together. Pipe A is closed after X min. Total time taken to fill the tank is 30 min. Find X.

(a) 15 minutes
(b) 18 minutes
(c) 12 minutes
(d) 9 minutes
(e) 6 minutes

Answer – (c)
Explanation -
LCM of 36 and 45 is 180
So, let total work is 180 units
Work done by pipe A is 1 minute = 180/36 = 5 unit
Work done by pipe B is 1 minute = 180/45 = 4 unit
Pipe A is open for X minutes whereas Pipe B is open for the entire 30 minutes.
5X + 4(30) = 180
5X = 60
X = 12 minutes

Q.72) A set has 5 consecutive even numbers. Square of average of last 3 numbers of the set is 420 more than square of smallest number of the set. What is the sum of smallest and largest even numbers of the set together?

(a) 74
(b) 76
(c) 70
(d) 72
(e) 78

Answer – (d)

Explanation -

Let the five consecutive even numbers be A-4, A-2, A, A+2, A+4.

$((A + A + 2 + A + 4)/3)^2 = (A – 4)^2 + 420$

$((3A + 6)/3)^2 = A^2 + 16 – 8A + 420$

$(A + 2)^2 = A^2 + 436 – 8A$

$A^2 + 4 + 4A = A^2 + 436 – 8A$

$12A = 432$

$A = 36$

Required Sum = (A – 4) + (A + 4) = 36 – 4 + 36 + 4 = 72

Q.73) Area of a rectangle is 96 square metre more than the area of a triangle. Length of rectangle is 18 m. Height of triangle is 20 m. Base of triangle is equal to breadth of rectangle. Find the perimeter of rectangle.

(a) 60
(b) 72
(c) 54
(d) 64
(e) 48

Answer – (a)

Explanation -

Area of rectangle = Length x Breadth

Area of triangle = 1/2 x Base x Height

Base = Breadth

Length x Breadth = 96 + (1/2 x Base x Height)

18 x Breadth = 96 + (1/2 x Breadth x 20)

18 x Breadth = 96 + (10 x Breadth)

8 x Breadth = 96

Breadth = 12m

Perimeter = 2 x (Length + Breadth) = 2 x (18 + 12) = 60m

Q.74) Vessel A contains 120 litre mixture of milk and water in the ratio 17:7. 40% is poured out into vessel B. Vessel B already contains 100 litre mixture of equal milk and water. Find the new ratio of milk and water in vessel B.

(a) 32:21
(b) 21:16
(c) 15:8
(d) 25:14
(e) 18:11

Answer – (b)
Explanation -
Milk = 17/24 x 120 = 85
Water = 7/24 x 120 = 35
40% of 85 = 34
40% of 35 = 14
New quantity of Milk in vessel B = 34 + 50 = 84
New quantity of Water in vessel B = 14 + 50 = 64
New ratio = 84 : 64 = 21 : 16

Q.75) Ratio of present age of Ranjan and Sanjay is 3:2. Sanjay's age 8 years hence will be equal to Ranjan's age 8 years ago. If Irfan is 12 years older than Sanjay, what is the present age of Irfan?

(a) 60
(b) 44
(c) 42
(d) 32
(e) 52

Answer – (b)
Explanation -
Let Ranjan's present age be 3y and Sanjay's present age be 2y.
2y + 8 = 3y – 8
y = 16
Present age of Sanjay = 2y = 32
Present age of Irfan = 32 + 12 = 44

Q.76) Marks obtained by A, B, C = 207. A scores 3/4th of B. B scores average of A, B and C plus 3. Find the ratio of marks of A and C.

(a) 4:5
(b) 8:9
(c) 2:3
(d) 3:4
(e) 5:6

Answer – (c)
Explanation -
B = ((A+B+C)/3) + 3
B = 207/3 + 3
B = 72
A = 3B/4
A = 3x72/4 = 54
C = 207 – 54 – 72 = 81
Required ratio = 54 : 81 = 2 : 3

Q.77) A principal of Rs 10500 is invested in scheme A at Simple Interest at 12% p.a. for 10 years. One-third of the interest earned from A is invested in scheme B at 12% p.a. simple interest for 5 years. Find the amount received from B after 5 years.

(a) 7240
(b) 5480
(c) 6720
(d) 2520
(e) 6250

Answer – (c)

Explanation -

Interest earned from A = 10500 x 12 x 10/100 = 12600
One-third interest = 12600/3 = 4200
Rs 4200 are invested in scheme B for 5 years.
So, interest earned from B = 4200 x 12 x 5 / 100 = 2520
Amount received from B after 5 years = 4200 + 2520 = 6720

Q.78) (11.99) 1/3 X 124.989 + 407.05 / 10.98 = ?

(a) 537
(b) 425
(c) 754
(d) 224
(e) 256

Answer – (a)

Explanation -

This is a question of simplification and approximation where we can take the approximate values of the numbers given.
12/3 x 125 + 407/11 = 4 x 125 + 37 = 500 + 37 = 537

Q.79) 864.02 / 3.99 + 38.05 / 18.98 X 110.01 = ??

(a) 330
(b) 452
(c) 395
(d) 436
(e) 334

Answer – (d)

Explanation -

This is a question of simplification and approximation where we can take the approximate values of the numbers given.
864/4 + 38/19 x 110 = 216 + 2 x 110 = 216 + 220 = 436

Q.80) 74.998 + 19.99% of 1650.01 / $(899.99)^{0.5}$ = ??

(a) 205
(b) 154
(c) 86
(d) 102
(e) 98

Answer – (c)

Explanation -

This is a question of simplification and approximation where we can take the approximate values of the numbers given.

$75 + 20\% \times 1650 / 900^{0.5} = 75 + 330/30 = 75 + 11 = 86$

Q.81) If a boat travels 40 km upstream, it takes 3 hours 12 minutes. Speed of stream is 3 kmph. If the speed of boat in still water in increased by 20%, what is the time taken to cover 54 km downstream?

(a) 1 hour 30 min
(b) 1 hour 20 min
(c) 2 hour 30 min
(d) 3 hour 15 min
(e) 2 hour

Answer – (c)

Explanation -

Speed of stream = 3 kmph
Upstream speed = speed of boat in still water – speed of stream
3 hours 12 minutes = 3 + 12/60 = 3 + 1/5 = 16/5 hours
Upstream speed = 40/(16/5) = 200/16 = 25/2 = 12.5 kmph
Speed of boat in still water = 12.5 + 3 = 15.5 kmph
Increased speed of boat = 15.5 x 1.2 = 18.6 kmph
Downstream speed = speed of boat in still water + speed of stream
Downstream speed = 18.6 + 3 = 21.6 kmph
Time taken = distance/speed = 54/21.6 = 2.5 hours or 2 hours and 30 minutes

Q.82) Find out the wrong number in the below given series:
217, 267, 304, 330, 348, 357

(a) 357
(b) 348
(c) 330
(d) 304
(e) 267

Answer – (b)

Explanation -

$267 – 217 = 50 = 7^2 + 1$
$304 – 267 = 37 = 6^2 + 1$
$330 – 304 = 26 = 5^2 + 1$
$348 – 330 = 18 = 4^2 + 2$ (so, 348 is the wrong term; it should have been 347)
$357 – 347 = 10 = 3^2 + 1$

Q.83) Find out the wrong number in the below series:
177, 190, 205, 224, 249, 283

(a) 224
(b) 190
(c) 249
(d) 283
(e) 205

Answer – (d)
Explanation -
177 + 13 = 190
190 + 15 (13 + **2**) = 205
205 + 19 (15 + **4**) = 224
224 + 25 (19 + **6**) = 249
249 + 33 (25 + **8**) = 282

Q.84) Find out the wrong number:
74, 92, 115, 143, 176, 217, 257
(a) 115
(b) 176
(c) 257
(d) 143
(e) 217
Answer – (e)
Explanation -
92 – 74 = 18
115 – 92 = 23
143 – 115 = 28
176 – 143 = 33
214 – 176 = 38 (so, 217 is the wrong term)
257 – 214 = 32

Instructions for Q.85 to Q.90
Consider the below table which contains data about male and female population in the year 2019 in three towns namely A, B and C.

Town (2019)	Difference between male and female population	Ratio between male and female
A	15000	7:13
B	20000	6:1
C	40000	11:3

Q.85) In 2020, number of males in town B was 80% more than number of females in town C in 2019. What was the percentage increase in number of males in town B from 2019 to 2020?
(a) 12.5
(b) 20.5
(c) 8.5
(d) 18.5
(e) 16.5
Answer – (a)
Explanation -

If we assume that male population is 7a and female population is 13a in town A in 2019, then
13a – 7a = 6a = 15000
So, a = 2500
Male population in town A = 7a = 17500
Female population in town A = 13a = 32500
Similarly, assume male population in town B is 6b and female population is b, then
6b – b = 5b = 20,000
So, b = 4,000
Male population in town B = 6b = 24,000
Female population in town B = b = 4,000
Finally, assume male population in town C is 11c and female population is 3c, then
11c – 3c = 8c = 40,000
So, c = 5,000
Male population in town C = 11c = 55,000
Female population in town C = 3c = 15,000
Now,
Number of males in B in 2020 = 1.8 x (number of females in C in 2019)
Number of males in B in 2020 = 1.8 x 15,000 = 27,000
Percentage increase in males in B from 2019 to 2020 = (27,000 – 24,000) / 24,000 = 12.5%

Q.86) Population of males in town D is 13000. Population of females in town D is equal to the average of population of males in A, B, C, D. What is the population of females in D?

(a) 30475
(b) 27375
(c) 26455
(d) 28915
(e) 25295

Answer – (b)
Explanation -
Total population of males in A, B, C and D = 17,500 + 24,000 + 55,000 + 13,000 = 1,09,500
Total female population = 1,09,500/4 = 27375

Q.87) What is the difference between total males in town A & C together and females in town C?

(a) 65700
(b) 57500
(c) 62100
(d) 58900
(e) 45300

Answer – (b)
Explanation -
Total males in A and C = 17500 + 55000 = 72500
Total females in C = 15000
Required difference = 72500 – 15000 = 57500

Q.88) 5000 males from town C work in an organization and the remaining work in a farm. 20% of males in town C who work in farm like coffee, and the remaining like tea. What is the number of males from town C who work in farm and like tea?

(a) 38000
(b) 30000
(c) 56000
(d) 40000
(e) 10000

Answer – (d)

Explanation -

Males from town C who work in farm = 55,000 – 5,000 = 50,000
Males working in farm who like tea = 80% x 50,000 = 40,000

Q.89) Number of females in town A is what percentage more than number of females in town C?

(a) 117
(b) 180
(c) 84
(d) 42
(e) 158

Answer – (a)

Explanation -

Females in town A = 32500
Females in town C = 15000
Required percentage = (32500 – 15000)/15000 x 100 = 116.17% ~ 117%

Q.90) The ratio between number of females in town B and number of males in town E is 8:17. What is the ratio between number of males in town E and number of males in town A?

(a) 19:35
(b) 17:35
(c) 17:33
(d) 13:35
(e) 15:37

Answer – (b)

Explanation -

Number of females in B = 4000
Number of males in E = 17/8 x 4000 = 8500
Number of males in A = 17,500
Required ratio = males in E : males in A = 8,500 : 17,500 = 17 : 35