

IBPS PO Pre 2016 Quant Question Paper with Solution (DOWNLOAD PDF)





Directions: Study the following table and answer the questions that follow.

	Delhi		Mumbai		Kolkata	
	Vehicles sold	Two Wheelers	Vehicles sold	Two Wheelers	Vehicles sold	Two Wheelers
2001	25000	14000	28000	15200	22000	8000
2002	39000	26000	33000	18600	26000	7500
2003	43000	28000	42000	28300	31000	9600
2004	52000	31000	55000	26500	38000	11500

- 1. What is the average number of two wheelers sold in Mumbai for all these years?
- A. 21650
- B. 22150
- C. 22650
- D. 23150
- E. 23650
- 2.In 2003 if Bajaj sold 35% of the total two wheelers, then what is the total number of vehicles sold by Bajaj across these cities?
- A. 22955
- B. 23065
- C. 23155
- D. 23265
- E. 22165
- 3.In 2003 if Bajaj sold 35% of the total two wheelers, then what is the approximate average number of vehicles sold by Bajaj across these cities?
- A. 7700
- B. 7500
- C. 7400
- D. 8700
- E. 8100





- 4.Total number of two wheelers sold in Kolkata from 2001 2004 is what percent of total vehicles sold in Delhi from 2001 to 2003?
- A. 32.5%
- B. 32.9%
- C. 33.3%
- D. 33.6%
- E. 34.2%
- 5.What is the difference between percentages of two wheelers sold in Delhi and Kolkata from 2001 04? Here percentage is with respect to total number of vehicles in that city.
- A. 15%
- B. 20%
- C. 25%
- D. 30%
- E. 35%
- 6.The average marks in science subject of a class of 20 students is 68. If the marks of two students were misread as 48 and 65 while the actual marks are 72 and 61 respectively, then what would be the correct average?
- A. 68.5
- B. 69
- C. 69.5
- D. 70
- E. 66
- 7.In a container, there is 960 ltr of pure milk from which 48 ltr of milk is replaced with 48 ltr of water, again 48 ltr milk is replaced by same amount of water, as this process is done once more. Now, what is the amount of pure milk?
- A. 901.54 ltr
- B. 821.54 ltr
- C. 719.64 ltr
- D. 823.08 ltr
- E. 829.64 ltr





8.4 years ago, the ratio of $\frac{1}{2}$ of Anita's age at that time and four times of Bablu's age at that time was 5 : 12. Eight years hence, $\frac{1}{2}$ of Anita's age at that time will be less than Bablu's age at that time by 2 years. What is Bablu's present age?

A. 10 years

B. 24 years

C. 9 years

D. 15 years

E. 18 years

9.A, B & C started a business and invested in the ratio 7:6:5. Next Year, they increased their investment by 25%, 20% and 15%, respectively. In what ratio should profit earned only during 2^{nd} year be distributed?

A. 155: 144: 175
B. 155: 124: 95
C. 135: 147: 152
D. 175: 144: 115
E. None of the above

10.A shopkeeper gives 20% discount on the marked price of a book. He provides 1 pair of books free with the sale of 9 pair of books. In the whole transaction, he gets the profit of 26%. By how much percent, the marked price is above the cost price?

A. 35%

B. 65%

C. 75%

D. 26%

E. None of these





Directions: What will come in the place of the question mark (?) in the following number series?

11. 305, 338, 404, 503, 635, (?)

A. 820

B. 880

C. 800

D. 890

E. None of these

Direction: What should come in place of question mark (?) in the following number series?

12. 1, 3, 24, 360 , 8640, 302400, ?

A. 1452510

B. 154151

C. 14515200

D. 1542510

E. 1542512

Direction: What should come in place of question mark (?) in the following number series

13. 8, 14, 26, 44, 68, (?)

A. 94

B. 102

C. 96

D. 98

E. None of these

Direction: What will come in place of the question mark (?) in the following number series?

14. 14, 14, 8, 32, -28, ?

A. 121

B. 213

C. 92

D. 120

E. 240





Direction: What value should come at the place of question mark (?) in the given number series?

15. 11, 19, 40, 87, 173, ?

- A. 301
- B. 311
- C. 304
- D. 294
- E. 350

16.In a single throw with 2 dices, what is probability of neither getting an even number on one and nor a multiple of 3 on other?

- A. 11/36
- B. 25/36
- C. 5/6
- D. 1/6
- E. None of these

17.8 men can complete a work in 16 days. 16 women can complete the same work in 24 days. In how many days can 4 men and 8 women complete the same work?

- A. 8
- B. 20
- C. 19.2
- D. 55
- E. 40

18.Both S.I. and C.I. is calculated with a similar rate of 10% per annum on a sum of rupees. If C.I. is calculated yearly for two years, then for what period must S.I. be evaluated such that S.I. will be equal to C.I.?

- A. 4.2 years
- B. 2.1 years
- C. 1.6 years
- D. 1.4 years
- E. None of the above





19.A uniformly moving train of length 480 m takes 3 minutes to completely cross a platform . If the same train, with the same speed crosses a pole completely in 30 sec, then the length of the platform is -

- A. 1 km
- B. 600 m
- C. 4.8 km
- D. 1.2 km
- E. 2.4 km

20. The perimeter of a rectangle whose length is 6 metre more than its breadth is 84 metre. What is the area of the triangle whose base is equal to the diagonal of the rectangle and height is equal to the length of the rectangle?

- A. 360sq metre
- B. 380 sq metre
- C. 300 sq metre
- D. 400 sq metre
- E. None of these

Directions: In the following question, two equations numbered I and II are given. You have to solve both the equations and establish the relationship between the given variables:

21. I.
$$5x^2 + 28x = -15$$

II.
$$3y^2 + 11y + 6 = 0$$

- A. X > Y
- B. $X \ge Y$
- C. X < Y
- D. $X \leq Y$
- E. X = Y or the relationship cannot be established



Direction: In the following question, two equations are given in variables x and y. You have to solve these equations and determine relation between x and y.

22. I.
$$x^2 + 30x + 81 = 0$$

II.
$$y^2 - 9y - 162 = 0$$

A. x > y

B. $x \ge y$

C. x < y

D. $x \le y$

E. x = y or the relationship can't be established

Direction: In the following question, two equations are given. You have to solve both the equations and give the answer accordingly:

23. I.
$$2x^2 - 21x + 54 = 0$$

II.
$$y^2 - 14y + 49 = 0$$

A. x = y or relation can't be established between x and y

B. x > y

C. x < y

D. $x \ge y$

E. x≤ y

Direction: In the following question two equations are given in variables x and y. You have to solve these equations and determine the relation between x and y.

24. I.
$$x^2 - 5x - 24 = 0$$

II.
$$2y^2 + 19y + 35 = 0$$

A. x > y

B. $x \ge y$

C. x < y

D. $x \le y$

E. x = y or relationship between x and y cannot be determined



Directions: In each on the following question two equations are given. You have to solve the equations.

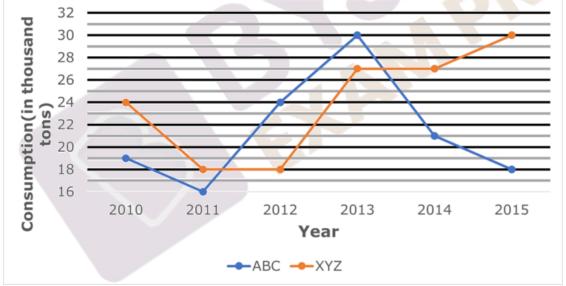
25. I.
$$x^2 = 529$$

II.
$$y = \sqrt{529}$$

- A. x>y
- B. x≥y
- C. x<y
- D. x≤y
- E. x=y or relation can't be established.

Direction: Study the following graph carefully and answer the questions given below it.

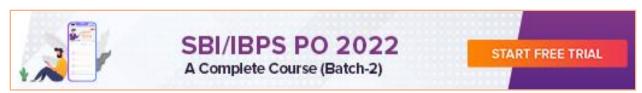
The graph given below shows the consumption(in thousand tons) of two kinds of Wheat represented by ABC and XYZ in the given years by a village.



- 26. What was the difference in consumption of ABC and XYZ in 2014?
- A. 5 tons
- B. 500 tons
- C. 600 tons
- D. 5000 tons
- E. None of these



- 27.In which of the following years, the consumption of both the types of wheat together was 2nd lowest?
- A. 2010
- B. 2012
- C. 2013
- D. 2014
- E. None of these
- 28.In which of the following pair of years, the consumption of type ABC was equal to the consumption of both types of wheat in 2015?
- A. 2010 and 2011
- B. 2011 and 2015
- C. 2010 and 2015
- D. 2013 and 2015
- E. None of these
- 29.In how many years, the consumption of Wheat of type ABC was less than the average consumption of Wheat of type XYZ in all the given years?
- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- 30. What is the percent decrease in consumption of ABC in 2014 in comparison to 2012?
- A. 25%
- B. 10%
- C. 8%
- D. 12.5%
- E. None of these





Direction: What approximate value should come in place of the question mark (?) in the following equation (Note: You are not expected to calculate the exact value)?

31. $\sqrt{573.987} \times (515)^{1/3} + 39.969 \times 4.999 + 6.989^{1.987} \times 55.99 = ? + 195.987^{2.989 \div 1.993}$

A. 384

B. 392

C. 410

D. 372

E. 402

Directions: What approximate value should come in place of the question mark (?) in the following equation (Note: You are not expected to calculate the exact value)?

32. (55.01+16.0003)×22.01÷10.998 =?

A. 190

B. 130

C. 110

D. 142

E. 175

Direction: What approximate value should come in place of the question mark (?) in the following question (Note: You are not expected to calculate the exact value)?

 $33.499.99 + 1999 \div 39.99 \times 50.01 = ?$

A. 3200

B. 2700

C. 3000

D. 2500

E. 2400





Direction: You are required to calculate approximate value of the sums given below

34.
$$[(7.99)^2 - (13.001)^2 + (4.01)^3]^2 = ?$$

- A. -1800
- B. 1450
- C. -1660
- D. 1681
- E. -1450

Direction: What approximate value should come in place of the question mark (?) in the following questions? (You are not expected to calculate the exact value.)

- $35.\ 21.003 \times 39.998 209.91 = 126 \times ?$
- A. 5
- B. 4
- C. 3
- D. 2
- E. 6





ANSWERS

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1. Ans. B.
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Vehicles stored in 2001 = 15200

Vehicles stored in 2002 = 18600

Vehicles stored in 2003 = 28300

Vehicles stored in 2004 = 26500

Total vehicles sold = 15200 + 18600 + 28300 + 26500 = 88600

Average sale = 88600/4 = 22150

2. Ans. B.

Vehicles sold in Delhi = 28000

Vehicles sold in Mumbai = 28300

Vehicles sold in Kolkata = 9600

Total Vehicles(two wheelers) Sold = 28000 + 28300 + 9600 = 65900

Vehicles sold by Bajaj = 35% of 65900 = 35/100 * 65900 = 23065

3. Ans. A.

Vehicles(two wheelers) sold in Delhi = 28000

Vehicles(two wheelers) sold in Mumbai = 28300

Vehicles(two wheelers) sold in Kolkata = 9600

Total Vehicles Sold(two wheelers) = 28000 + 28300 + 9600 = 65900

Vehicles(two wheelers) sold by Bajaj = 35% of 65900 = 35/100 * 65900 = 23065

Average = 23065/3 = 7688.33

=7700(approx.)

4. Ans. E.

Two wheelers sold in Kolkata in 2001 = 8000

Two wheelers sold in Kolkata in 2002 = 7500

Two wheelers sold in Kolkata in 2003 = 9600

Two wheelers sold in Kolkata in 2004 = 11500

Total two wheelers sold in Kolkata = 8000 + 7500 + 9600 + 11500 = 36600

Vehicles sold in Delhi in 2001 = 25000

Vehicles sold in Delhi in 2002 = 39000

Vehicles sold in Delhi in 2003 = 43000

Total vehicles sold in Delhi from 2001 - 03 = 107000

Percentage = (36600/107000)*100 = 34.20%





5. Ans. D.

Two wheelers sold in Kolkata in 2001 = 8000

Two wheelers sold in Kolkata in 2002 = 7500

Two wheelers sold in Kolkata in 2003 = 9600

Two wheelers sold in Kolkata in 2004 = 11500

Total two wheelers sold in Kolkata = 8000 + 7500 + 9600 + 11500 = 36600

Vehicles sold in Kolkata in 2001 = 22000

Vehicles sold in Kolkata in 2002 = 26000

Vehicles sold in Kolkata in 2003 = 31000

Vehicles sold in Kolkata in 2004 = 38000

Total vehicles sold in Kolkata = 22000 + 26000 + 31000 + 38000 = 117000

Percentage of two wheelers sold in kolkata = 31.28%

Two wheelers sold in Delhi in 2001 = 14000

Two wheelers sold in Delhi in 2002 = 26000

Two wheelers sold in Delhi in 2003 = 28000

Two wheelers sold in Delhi in 2004 = 31000

Total two wheelers sold in Delhi = 14000 + 26000 + 28000 + 31000 = 99000

Vehicles sold in Delhi in 2001 = 25000

Vehicles sold in Delhi in 2002 = 39000

Vehicles sold in Delhi in 2003 = 43000

Vehicles sold in Delhi in 2004 = 52000

Total vehicles sold in Delhi = 25000 + 39000 + 43000 + 52000 = 159000

Percentage of two wheelers sold in delhi = 62.26%

Difference between percentages = 62.26 - 31.28 = 30.98 \tilde{A} 30

6. Ans. B.

Difference of marks = 72 + 61 - 48 - 65 = 20

$$\therefore \text{ Correct average marks} = 68 + \frac{20}{20} = 69$$

Hence, option B is correct.

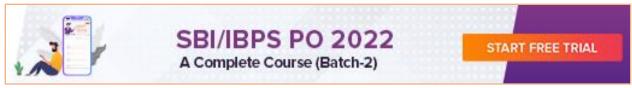
7. Ans. D.

Amount of pure milk

$$= a(1 - b/a)^n$$
 (n = 3, a = pure milk and b = amount replaced)

$$= 960 (1 - 48/960)^3 = 960(1-1/20)^3$$

= 823.08 lt.





8. Ans. A.

Let present age of Anita= 'x' years And present age of Bablu= 'y' years

Now,
$$\frac{\frac{x-4}{2}}{4(y-4)} = 5/12$$

$$12x - 48 = 40y - 160$$

$$3x-10y+28=0$$
(i)

And,

$$\frac{1}{2}(x+8)=(y+8)-2$$

$$x + 8 = 2y + 12$$

$$x-2y=4$$
(ii)

Now, from eqn. (i) & (ii)

Bablu present age, y = 10 years

9. Ans. D.

Let A's investment be= 7a

Let B's investment be= 6a

Let C's investment be= 5a

The profit will be shared in the similar ratio to their investment in 2nd year of partnership.

Hence, their profit for 2^{nd} year = (125% of 7a): (120% of 6a): (115% of 5a)

= 175 : 144 : 115

10. Ans. C.

Let us suppose he has to sell 18 books.

Then he will give 1 pair of books extra.

Total books sold is 20.

 $CP ext{ of } 20 ext{ books} = 20 ext{ C.P.}$

Now since, he gains 26% in transaction, therefore, SP of 20 books = 1.26*20

C.P = 25.2 CP

Now, actually, the customer paid the price for 18 books only.

So, MP of 18 books = 25.2 C.P./0.8 = 31.5 CP

Now, % above CP = (31.5-18)/18 * 100 = 13.5/18 * 100 = 75% ans.





Aliter

Given,

Let the cost price of a single book be Rs. 100.

The cost price of (9 + 1) = 10 pair i.e. 20 books = Rs. $(100 \times 20) = Rs. 2000$. He gets a profit of 26%.

So, the selling price of 9 pair i.e. 18 books = Rs. $2000 \times (126/100) = Rs.$ 2520

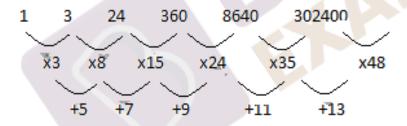
Then, the selling price of a single book = Rs. 2520/18 = Rs. 140

He gives 20% discount on the marked price of a book.

That means, when the selling price is Rs. 80 then the marked price is Rs. 100.

- \therefore When the selling price of single book is Rs. 140, the marked price = Rs. 140 \times (100/80) = Rs. 175
- \therefore The percentage increase in marked price from the cost price = (175 100)% = 75%.
- 11. Ans. C.

12. Ans. C.



13. Ans. D.

The pattern is +6, +12, +18, +24

So the missing term is = 68 + 30 = 98

14. Ans. C.

The pattern of given series is:

$$\rightarrow$$
 14 + (1³-1) = 14,

$$\rightarrow$$
 14 - (2³ -2) = 8,

$$\rightarrow$$
 8 + (3³ - 3) = 32,





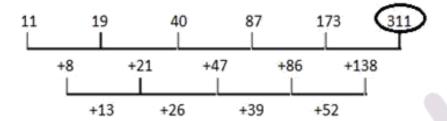
$$\rightarrow$$
 32 - (4³ -4)= -28,

$$\rightarrow$$
-28 + (5³ -5) =?=92,

Thus, the missing number is 92

15. Ans. B.

The pattern of the series is:



Hence, the missing number is 311.

16. Ans. B.

We first calculate the probability of getting an even number on one and a multiple of 3 on other,

Here, n(s) = 6x6 = 36 and

$$E = (2,3)(2,6)(4,3)(4,6)(6,3)(6,6)(3,2)(3,4)(3,6)(6,2)(6,4)$$

$$n(E) = 11$$

$$P(E) = 11/36$$

Required probability = 1 - 11/36 = 25/36

17. Ans. C.

8men *16 days = 16women * 24days = work

1men = 3 women (by equivalence)

Work = 8men *16 days = (4men + 8 women) * 'k' days

128 man days = (4men +8*(1/3)men)* 'k' days

128 mandays = (20/3)k mandays

k = 19.2 days

18. Ans. B.

Let time period of S.I. be T years. Then for a principal amount, say P,

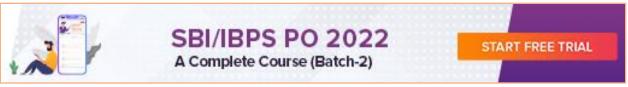
ATQ, as, S.I. = C.I. for rate = 10%p.a. and time for C.I. = 2

 $(P \times 10 \times T)/100 = P\{[(100+10)/100]^2 - 1\}$

 $T/10 = \{[110/100]^2 - 1\} = [(11/10)^2 - 1] = (121-100)/100$

T/10 = 21/100

T = 21/10 = 2.1 years





19. Ans. E.

Let length of platform be 'y'metres.

Then, at the platform,

Distance travelled = y + (length of train) = (y + 480)m

Then, Speed of train = (y + 480)m / (3x60) sec = (y+480)/180 ...(1)

Also, at the pole,

Distance travelled = length of train = 480m

Then, Speed of train = 480 m / 30 sec = 16 m/s ...(2)

Equating eq.(1) & eq.(2), we get,

(y+480)/180 = 16

 $(y+480) = 16 \times 180 = 2880$

y = 2880 - 480 = 2400 m or 2.4 km long platform.

20. Ans. A.

Let the breadth of rectangle be x m. Then, the length of rectangle = (x + 6) m

Perimeter of rectangle = 2(x + x + 6) m

Therefore, 2(x + x + 6) = 84 m

$$4x + 12 = 84$$

$$4x = 84 - 12$$

$$4x = \frac{72}{4} = 18$$

Therefore, length of rectangle = 18 + 6 = 24 m = height of triangle

Diagonal of rectangle = $\sqrt{18^2 + 24^2} = \sqrt{324 + 576} = \sqrt{900} = 30 \,\text{m}$

= base of triangle

Therefore, are of triangle = $\frac{1}{2}$ × base × height = $\frac{1}{2}$ × 24 × 30 = 360 sq. m

Hence, option A is correct.

21. Ans. E.

Ans. E

I.
$$5x^2 + 28x = -15$$

$$x = (-3/5, -5) = (-0.6, -5)$$

II.
$$3y^2 + 11y + 6 = 0$$

$$y = (-3, -2/3) = (-3, -0.66)$$

So Relationship cannot be established as x1>y1 but x2<y1





22. Ans. E.

I.
$$x^2 + 30x + 81 = 0$$

$$\Rightarrow$$
 x² + 27x + 3x + 81 = 0

$$\Rightarrow$$
 x(x + 27) + 3(x + 27) = 0

$$\Rightarrow (x + 3)(x + 27) = 0$$

$$\Rightarrow$$
 x = -3, -27

II.
$$y^2 - 9y - 162 = 0$$

$$\Rightarrow$$
 y² - 18y + 9y - 162 = 0

$$\Rightarrow$$
 y(y - 18) + 9(y - 18) = 0

$$\Rightarrow (y + 9)(y - 18) = 0$$

$$\Rightarrow$$
 y = -9, 18

Hence, no relationship can be established between x and y.

23. Ans. C.

I.
$$2x^2 - 21x + 54 = 0$$

$$(x - 6)(2x - 9)$$

$$x = +6, +9/2$$

II.
$$y^2 - 14y + 49 = 0$$

$$(y-7)(y-7)$$

$$y = +7, +7$$

I.
$$x^2 - 5x - 24 = 0$$

$$\Rightarrow x^2 - 8x + 3x - 24 = 0$$

$$\Rightarrow x(x-8) + 3(x-8) = 0$$

$$\Rightarrow (x - 8)(x + 3) = 0$$

$$\Rightarrow$$
 x = -3, 8

II.
$$2y^2 + 19y + 35 = 0$$

$$\Rightarrow 2y^2 + 14y + 5y + 35 = 0$$

$$\Rightarrow 2y(y+7) + 5(y+7) = 0$$

$$\Rightarrow (2y + 5)(y + 7) = 0$$

$$\Rightarrow$$
 y = -7, -2.5

So, relationship can't be established.



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25. Ans. D.

 $x = \pm 23$

And, y = 23 hence, $x \le y$

26. Ans. E.

From the Graph,

Consumption of Rice ABC in 2014 = 21 thousand tons

Consumption of Rice XYZ in 2014 = 27 thousand tons

Required Difference = (27 - 21) = 6 thousand tons

27. Ans. B.

As it can be seen from the graph given in question,

Year	Consumption of type	Consumption of type	Total Consumption of
	ABC	В	both types
2010	19	24	43
2011	16	18	34
2012	24	18	42
2013	30	27	57
2014	21	27	48
2015	18	30	48

Clearly, the consumption of both the types of rice together was 2nd lowest in 2012.

28. Ans. D.

Consumption of both types of rice in 2015 = (18 + 30) thousand tons = 48 thousand tons

Now, let's check the options one by one

For Option A

Consumption = (19 + 16) thousand tons = 35 thousand tons

For Option B

Consumption = (16 + 18) thousand tons = 34 thousand tons

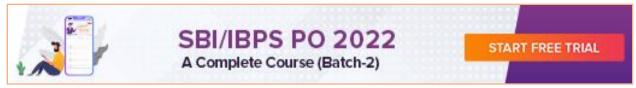
For Option C

Consumption = (19 + 18) thousand tons = 37 thousand tons

For Option D

Consumption = (30 + 18) thousand tons = 48 thousand tons

As it can be seen clearly, option D matches with the consumption amount of 2015.





29. Ans. D.

Average consumption of wheat of type XYZ =
$$\frac{24+18+18+27+27+30}{6}$$
 =

$$\frac{144}{6}$$
 = 24 thousand tons

As it can be seen from the given graph, consumption of wheat of type ABC was less than 24 thousand tons in 4 years, i.e. 2010, 2011, 2014, 2015. 30. Ans. D.

From the graph,

Consumption of type ABC in 2014 = 21 thousand tons

Consumption of type ABC in 2012 = 24 thousand tons

Difference between consumption of ABC in 2014 in comparison to 2012 = (24 - 21) = 3 thousand tons

Percentage decrease in consumption of ABC in 2014 in comparison to 2012

$$=\frac{3}{24}\times100\approx12.5\%$$

31. Ans. B.

Take nearest values

$$\sqrt{570} \times (515)^{1/3} + 40 \times 5 + 7^2 \times 56 - 196^{3 \div 2} = ?$$

$$24 \times 8 + 200 + 49 \times 56 - 14^3$$

32. Ans. D.

Take nearest values

 $(55.01+16.0003)\times22.01\div10.998 = ?$

$$71 \times 2 = 142$$

33. Ans. C.

By approximation, we get:

$$? = 500 + 2000 \div 40 \times 50$$

$$= 500 + (2000 \div 40) \times 50$$

$$= 500 + 50 \times 50$$

$$= 500 + 2500$$





34. Ans. D. $[(7.99)^2 - (13.001)^2 + (4.01)^3]^2 = X$ $X = [8^2 - 13^2 + 4^3]^2$ $X = [64 - 169 + 64]^2$ $X = [-41]^2$ X = 168135. Ans. A. Take nearest values $21.003 \times 39.998 - 209.91 = 126 \times ?$ $630 = 126 \times ?$? = 5 (approx)



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