Placement Classes

Telegram - https://t.me/placementclasses

Question 1:- a, b, c and d are four numbers in arithmetic progression. The mean of these four numbers is 20. The common difference between the numbers is 5. Find the product of first and last numbers.

a.13

b.34

c.442

d.124

Answer: c. 442

Explanation:

Let the four numbers be x, x+y, x+2y and x+3y

The mean of the four numbers = (x+x+y+x+2y+x+3y) / 4

= (4x+6y) / 4

= 20

By substitution of y as 5, the value of x is 13.

Hence the product of first and last numbers is 13*34,

= 442

Question 2:- A shopkeeper has two items A & B. A was sold at a profit of 25% and B was sold at a loss of 15%. If the cost price of A is 15% more than that of B, what is the overall profit/ loss % to the shopkeeper?

a.20.65

b.19.65

c.18.65

d.20

Answer: b. 19.65%

Explanation:

Assume the cost price of item A as x and B as 1.15x

Total cost price = 2.15x

Selling price of A = 1.25x

Selling price of B = 1.332x

Total Selling price = 2.5725x

In comparison of the total cost and selling prices, we understand that the shopkeeper had a profit

Profit = (2.5725x – 2.15x) = 0.4225x

Profit% = (profit / cost price)*100

Profit% = (0.4225 / 2.15) * 100 = 19.65%

Hence profit percentage = 19.65%

Question 3:- A set contains all numbers from 1 to 250. If a number is picked at random, what is the probability that it is a multiple of 3?

a.82/250

b.83/250

c.80/250

d.1/3

Answer: a. 83/250

Explanation:

The actual number of multiples of 3 within 250 is 83. Since 3*83 = 249

Hence the probability of picking a number being a multiple of 3 is 83/250

Question 4:- What comes next in the series 8, 15, 12, 19, 16, 23?

a.30

b.20

c.26

d.31

Answer: b. 20

Explanation:

Firstly the pattern followed in the series is,

To the first number 7 is added and from the second number 3 is subtracted.

Hence the next number in the series is 20.

Question 5:- From a point A on the ground, the angle of elevation of a tower is 45°. A ship moving at 20 m/sec started moving from point A to point B in 45 seconds. The angle of elevation from point B is 60°. Find the height of the tower.

a.$1350 + 450\sqrt{3}$

b.$1350\sqrt{3} + 450$

c.1800

d.None of the above

Answer : a. $1350 + 450\sqrt{3}$

Explanation:

Consider the height of the tower to be h meters

From the measure of the figure,

AC = 900 + BC (distance = speed * time)

When the angle of elevation of the tower = 45°

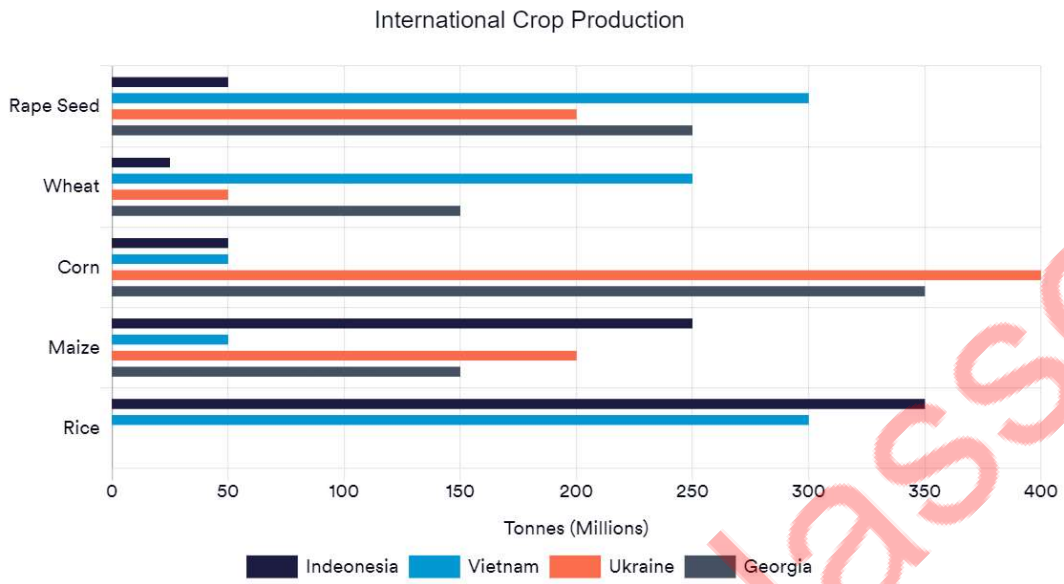
$(h/900 + BC) = \tan 45^\circ$

$(h/ BC) = \tan 60^\circ$

Solving for h and BC, we get

$h = 1350 + 450\sqrt{3}$

Question 6:-



What proportion of Georgia's total crop output is maize? (to the nearest)

1. 0%

2. 17%

3. 28%

4. 39%

Answer : option 2

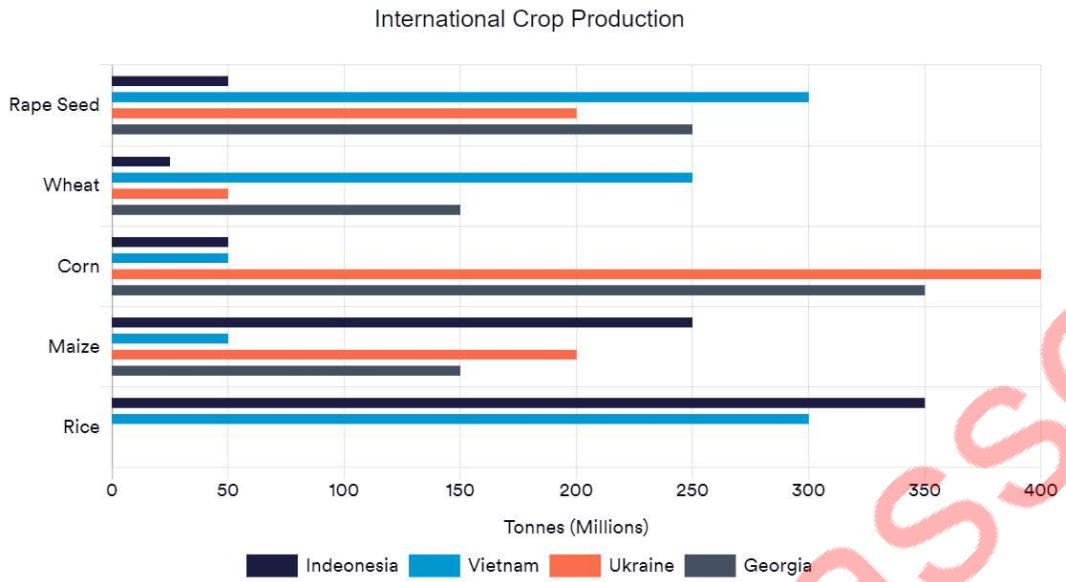
Explanation:

Georgia's total corp output =

150m + 350m + 150m 250m = 900m

Maize = 150m/900m x 100 = 16.66% = 17%

Question 7:-



If Vietnam's rice output decreased by 20% and its corn output increased by 35% in 2023, what would be the combined output (in millions of tonnes) of these crop?

1. 262.5

2. 280

3. 307.5

4. 445

Answer : option 3

Explanation:

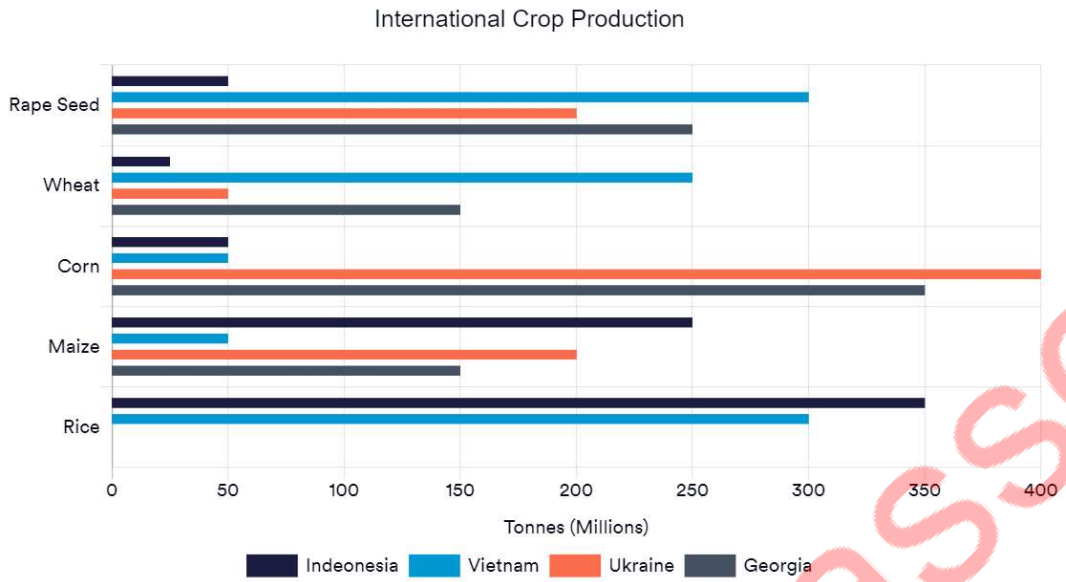
Vietnam rice output decrease of 20% 300m x (1-0.2)

= 240m tones

Corn increase of 35% 50m x (1+0.35) = 67.5m tones

240m 67.5m 307.5 tonnes

Question 8:-



Which country had the highest overall output of crops by tonnage?

1. Georgia

2. Indonesia

3. Ukraine

4. Vietnam

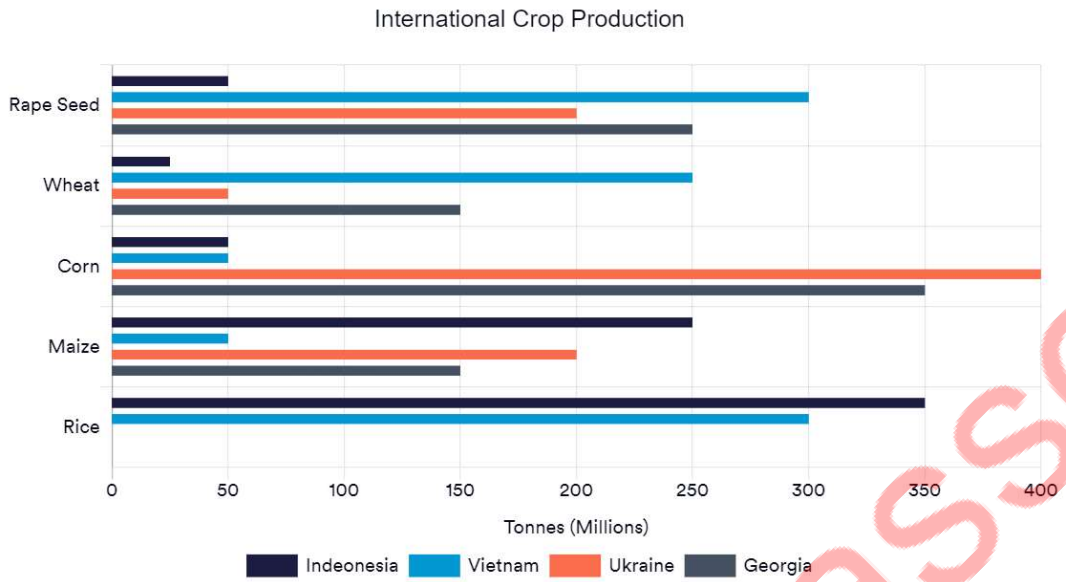
Answer : option 4

Explanation:

Simply add up all corp outputs by country. Vietnam has the highest overall output by tonnage:

$300m + 50m + 50m + 250m + 300m = 950m$ tones

Question 9:-



If Georgia's rapeseed output decreased by 20% in each of the following years what would be the rapeseed output in 2 years time in millions of tonnes)

1. 280

2. 224

3. 160

4. 192

Answer : option 3

Explanation:

Georgia's rapeseed output in 2012 was 250m tonnes

1 Year later = 250m x (1-0.2) = 200m tones

2 Years later = 200m x (1-0,2) = 160m tones