

Section #2

1/1/20

Q #7

a

Data

let number be $= X, y$

tenth is $= X$

Unit $= y$

that exceed tenth by 2

$$y = 2x \quad \text{--- (1)}$$

product and sum of number $= 144$

$$xy = 144$$

$$x + y = 144$$

$$x = 144 - y$$

put in eq (1)

$$y = 2(144 - y)$$

$$y = 288 - 2y$$

$$3y = 288$$

$$y = 96$$

So x will be

$$x(96) = 144$$

$=$

$$\begin{array}{r} x = 3 \\ \times 96 \\ \hline 144 \end{array}$$

$$x = 3/y$$

(b)

$$S_3 - 13 = 40$$

$$40 - 13 = 27$$

$$27 - 13 = 14$$

$$\begin{array}{r} 27 \\ 13 \\ \hline 14 \end{array}$$

SO

$S_3, S_3, 40, 40, 27, 27, 14, 14$

(11)

$$\begin{array}{r} 14 \\ 14 \\ \hline 28 \end{array}$$

$$28, 14 + 14 = 28$$

$$\begin{array}{r} 28 \\ 8 \\ \hline 20 \end{array}$$

$$28 - 8 = 20$$

$$\begin{array}{r} 20 \\ 20 \\ \hline 40 \end{array}$$

$$20 + 20 = 40$$

$$\begin{array}{r} 40 \\ 8 \\ \hline 32 \end{array}$$

$$40 - 8 = 32$$

$$\begin{array}{r} 32 \\ 32 \\ \hline 64 \end{array}$$

$$32 + 32 = 64$$

$$\begin{array}{r} 64 \\ 8 \\ \hline 56 \end{array}$$

$$64 - 8 = 56$$

$$\begin{array}{r} 56 \\ 8 \\ \hline 64 \end{array}$$

SO

$$\begin{array}{r} 64 \\ 8 \\ \hline 56 \end{array}$$

$14, 28, 20, 40, 32, 64, 56$

(111)

$8, 6, 9, 23, 87, 12, 10, 29$

$$23 + 12 = 35$$

$$\begin{array}{r} 87 \\ 23 \\ \hline 110 \end{array}$$

SO

BF IV

B.F.R, V

$$\begin{array}{r} 87 \\ 23 \\ \hline 110 \end{array}$$

4 2

A B C D E F G H I J K L M N
O P Q R

(V)

$V, u, w, v, x, w, y, x, z, y$

Vu, wv, xw, yx, zy

(C)

$$(C) \quad 20\% \text{ of } w = b \Rightarrow 0.2a = b$$

$$\frac{b}{20} = ?$$

$$\frac{b}{20} \times 20 \Rightarrow 0.2b$$

$$0.2a = b$$

So ~~20~~ % of 20 is same as
20% of w

(d)

Q#5 → (a)

Consecutive prime numbers Sum = 187

Let x be the prime number

$$x_1 + x_2 + x_3 = 187$$

$$59 + 61 + x_3 = 187$$

59
61
120

$$120 + x_3 = 187$$

$$x_3 = 187 - 120$$

$$x_3 = 67$$

$$x_3 = 67$$

So

$$59 + 61 + 67 = 187$$

(b)

(b)

Let x be the number

$$x^2 + 17x = 60x$$

$$x^2 + 17x = 60$$

$$x^2 + 17x - 60$$

$$x^2 - 12x - 5x - 60$$

$$x(x-12) - 5(x-12)$$

$$(x-5)(x-12)$$

$$x=5 \text{ or } x=12$$

(c)

(d)

$$P_1 = 175000$$

$$P_2 = 262500$$

Population increased

$$262500 - 175000$$

$$87500$$

% of increase

$$\frac{87500}{175000} \times 100 =$$

$$50\%$$

$$\frac{876}{1750} \times 100$$

$$\frac{876}{1750} \times 100$$

$$\frac{1750}{35} \times 7$$

$$\frac{1750}{35} \times 7$$

$$\frac{1750}{35} \times 7$$

50% increase in population

$$\frac{25}{80}$$

(d)

Number of Eggs = 20
price 375/dozen

(d)

$$price = 33/egg$$

total number of eggs

$$20 \times 12 = 240 \text{ eggs}$$

$$20 \times 12 = 240$$

price at which all eggs sold

$$= 33 \times 240$$

$$7920$$

$$\frac{7920}{240} = 33$$

11.8x

Price of purchasing egg
20x375

Rsc = 7500

Profit = 7920 - 7500

Profit = 420Rs

120
500
420