

Emmanuel School

Assignment NO-28

Sub- Maths

class VIII th.

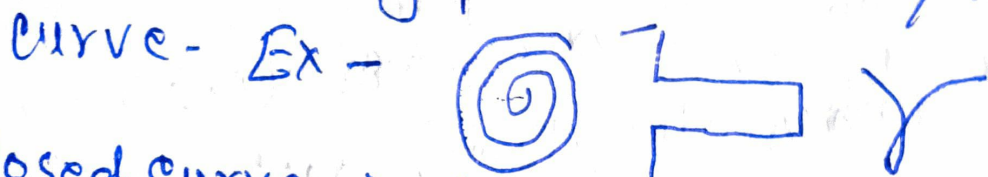
by. C. B. Kumar

Ch - 14 (Polygons)

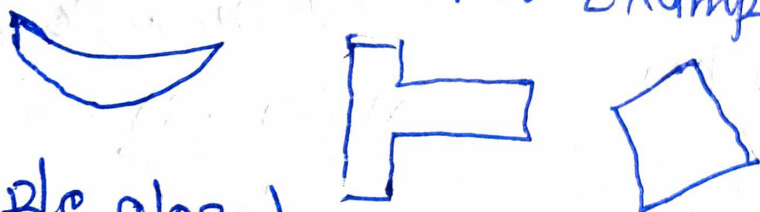
Exercise - 14. A

Curve A figure traced out on a plane surface with the help of a sharp pencil without lifting it is called curve.

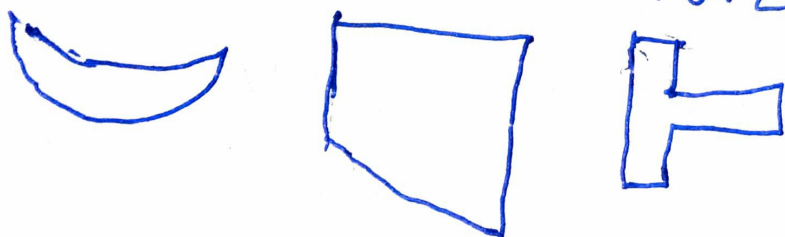
open curve → A curve that does not end at the starting point is called open curve.



closed curve → A curve that begins and ends at the same point is called closed curve. For Example,



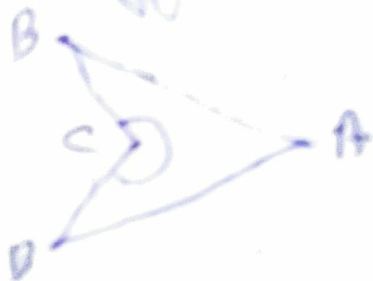
Simple closed curve → A closed curve which does not intersect itself is called simple closed curve. For Example,



(1)
Polygon - A simple closed curve made of only line segments is called a polygon.

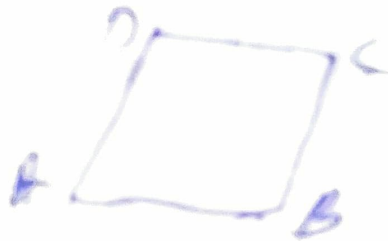
A polygon is called a triangle, quadrilateral, pentagon, hexagon, heptagon etc. There are two type of Polygons -

(i) Concave polygon - A polygon in which at least one angle is more than 180° is called a Concave polygon.



(ii) Convex polygon

A polygon in which each angle is less than 180° is called a convex polygon. Ex -



Regular polygon - \rightarrow A polygon having all sides equal and all angles equal, is called regular polygon.
Ex - equilateral triangle, square

(11)
1122
Irregular polygon - Polygon which are not regular are called irregular polygon.

Ex - Rectangle, Rhombus.

For a Regular polygon of n sides

- (i) Each Exterior angle = $\left(\frac{360}{n}\right)^\circ$
- (ii) Each Interior angle = $180^\circ - \text{each Exterior angle}$

In a Convex polygon of n sides

- (i) Sum of all exterior angles = 4 Right- \angle s
- (ii) Sum of all Interior angles =
 $= (2n - 4)$ right- \angle s

Number of diagonals in a polygon of n sides = $\frac{n(n-3)}{2}$

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Assignment No - 29

Sub - Maths

Class - VIIIth

By - C. B. Kumar

Ch. - 14

Exercise - 14 'A'

Q1 Find the measure of each exterior angle of a regular (i) pentagon (ii) hexagon

(iii) heptagon (iv) polygon of 15 sides

Q2 Is it possible to have a regular polygon each of whose exterior angles is 20° ?

Q3 Find the measure of each interior angle of a regular polygon having

(i) 10 sides (ii) 15 sides

Q4 Is it possible to have a regular polygon each of whose interior angle is 100° ?

Q5 What is the sum of all interior angles of a regular

(i) pentagon (ii) nonagon (iii) polygon of 12 sides -

Solution - Assignment NO-29

(1) Exterior angle of an n sides Polygon,
 $= \left(\frac{360}{n} \right)^\circ$

(i) Pentagon. $n = 5$

$$\text{Exterior } \angle = \frac{360}{5} = 72^\circ$$

(ii) For hexagon $n = 6$

$$\text{Exterior } \angle = \left(\frac{360}{n} \right)^\circ = \left(\frac{360}{6} \right)^\circ = 60^\circ$$

(iii) For a heptagon $n = 7$

$$\text{Exterior } \angle = \left(\frac{360}{n} \right)^\circ = \frac{360}{7} = 51.43^\circ$$

(iv) For a polygon of 15 sides $n = 15$

$$\text{Exterior } \angle = \left(\frac{360}{n} \right)^\circ = \left(\frac{360}{15} \right)^\circ = 24^\circ$$

(2) Each Exterior angle of n side Polygon = $\left(\frac{360}{n} \right)^\circ$

If the exterior angle is 50° then

$$\frac{360}{n} = 50^\circ \Rightarrow 50 \times n = 360$$

$$n = \frac{360}{50} = \frac{36}{5} = 7.2$$

7 sides

Thus n is not an integer: so we cannot

have a polygon with each exterior angle equal to 50°

(3) For a Regular Polygon with n sides

Each interior angle = $180^\circ - \text{Each Ex. L.}$

$$= 180^\circ - \left(\frac{360^\circ}{n}\right)$$

(i) For a polygon with 10 sides

Each Exterior angle = $\left(\frac{360^\circ}{10}\right) = 36^\circ$

Each Interior angle = $180^\circ - 36^\circ$

$$= 144^\circ \quad \text{A}$$

(ii) For a polygon with 15 sides

Each Exterior angle = $\left(\frac{360^\circ}{15}\right) = 24^\circ$

Each interior angle = $180^\circ - 24^\circ$

$$= 156^\circ \quad \text{A}$$

(4) Each interior angle of a regular polygon having n sides =

$$180^\circ - \left(\frac{360^\circ}{n}\right)$$
$$= \frac{180n - 360}{n}$$

of each interior angle of a polygon is 100° then.

$$100 = \frac{180n - 360}{n}$$

$$100n = 180n - 360$$

$$180n - 100n = 360$$

$$80n = 360$$

$$n = \frac{360}{80} = 4.5$$

Since n is not an integer, so it is not possible to have a regular polygon with each interior angle equal to 100°

(2) Sum of the interior angles of an n sides polygon = $(2n-4)$ Right-~~als~~

(i) For a pentagon $n = 5$

$$\begin{aligned} \therefore (2n-4) \times 90^\circ &= (2 \times 5 - 4) \times 90^\circ \\ &= (10 - 4) \times 90^\circ = 6 \times 90^\circ \\ &= 540^\circ \end{aligned}$$

(ii) For a nonagon $n = 9$

$$\begin{aligned} \therefore (2n-4) \times 90^\circ &= (2 \times 9 - 4) \times 90^\circ \\ &= (18 - 4) \times 90^\circ = 14 \times 90^\circ = 1260^\circ \end{aligned}$$

(11)

(iii) For a polygon of 12 sides

$$n = 12.$$

$$\therefore (2n - 4) \times 90^\circ$$

$$= (2 \times 12 - 4) \times 90^\circ$$

$$= (24 - 4) \times 90^\circ$$

$$= 20 \times 90^\circ = 1800^\circ$$

Ans

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Assignment No - 30

Sub - Maths.

class VIII

By. C. B. Kumar

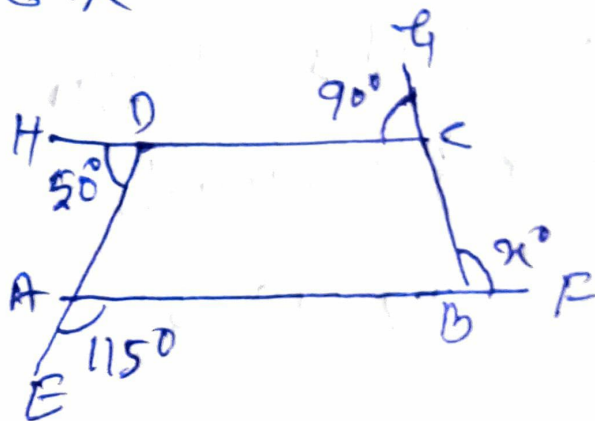
Ch - 14

Exercise - 14 (A)

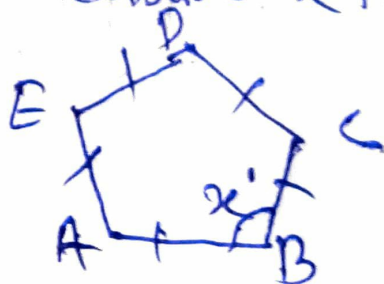
Q.1 - what is the number of diagonals in a (i) heptagon (ii) octagon. (iii) polygon of 12 sides.

(2) Find the number of sides of a regular polygon whose each exterior angle measures (i) 40° (ii) 30° (iii) 72°

(3) In the give figure find the angle measure x



(4) Find the angle measure x in the given figure



Solution - Assignment NO 30

(i) Number of diagonal in a n sided.

$$\text{Polygon} = \frac{n(n-3)}{2}$$

(ii) For a heptagon, $n = 7$.

$$\begin{aligned}\text{Number of diagonals} &= \frac{n(n-3)}{2} \\ &= \frac{7(7-3)}{2} = \frac{7 \times 4}{2} \\ &= \frac{28}{2} = 14\end{aligned}$$

(iii) For an octagon, $n = 8$

$$\begin{aligned}\text{Number of diagonals} &= \frac{n(n-3)}{2} \\ &= \frac{8(8-3)}{2} = \frac{8 \times 5}{2} = \frac{40}{2} = 20\end{aligned}$$

(iv) For a 12 sides polygon, $n = 12$

$$\begin{aligned}\text{Number of diagonals} &= \frac{n(n-3)}{2} \\ &= \frac{12(12-3)}{2} = \frac{12 \times 9}{2} \\ &= \frac{108}{2} = 54\end{aligned}$$

(2) Sum of all Exterior angles of a Regular polygon is 360°

(i) Each Exterior angle = 40°

$$\text{Number of sides} = \frac{360^\circ}{40} = 9 \text{ sides}$$

(ii) Each Exterior angle = 30°

$$\text{Number of sides} = \frac{360^\circ}{30} = 12 \text{ sides}$$

(iii) Each Exterior angle = 72°

$$\text{Number of sides} = \frac{360^\circ}{72} = 5 \text{ sides}$$

(3) Sum of all exterior angles of a Regular polygon is 360°

$$\angle GED + \angle HPA + \angle EAB + \angle FBC = 360^\circ$$

$$90^\circ + 50^\circ + 115^\circ + x^\circ = 360$$

$$255^\circ + x^\circ = 360^\circ$$

$$x^\circ = 360^\circ - 255^\circ$$

$$x^\circ = 105^\circ$$

Any

For a Regular n sides Polygon

$$\text{Each Interior angle} = 180^\circ - \left(\frac{360^\circ}{n}\right)$$

In the given figure $n = 5$

$$x^\circ = 180^\circ - \left(\frac{360^\circ}{5}\right)$$

$$= 180^\circ - 72^\circ$$

$$= 108^\circ$$

$$x = 108^\circ$$

Any

Assignment No. 24

Sub - Maths

Class. - VIIIth

by. C.B. Kumar.

Ch. - 10

Exercise - 10.A

(1) Find the gain or loss Percent when.

(i) $CP = ₹ 620$ and $SP = ₹ 713$

(ii) $CP = ₹ 675$ and $SP = ₹ 630$

(2) Find the selling price when

(i) $CP = ₹ 1650$ and gain = 4%

(ii) $CP = ₹ 875$ and loss = 12%

(3) Find the cost price when

(i) $SP = ₹ 1596$ and gain 12%

(ii) $SP = ₹ 675.60$ and loss 4%

(4) Robin purchased an old car for ₹ 72500. He spent ₹ 10300 on repairs and paid ₹ 2600 for its insurance. Then he sold it to a mechanic for ₹ 84240. What was his percentage gain or loss?

Solution. Assignment. No. 24

(1) (i) CP = Rs. 620

SP = Rs. 713

Since $SP > CP$

Gain = Rs. (713 - 620) = Rs. 93

Gain% = $\frac{\text{Gain}}{CP} \times 100$

= $\frac{93}{620} \times 100$

= 15%

(ii) CP = Rs. 675

SP = Rs. 630

Since $SP < CP$

Loss = Rs. (675 - 630) = Rs. 45

Loss% = $\frac{\text{Loss}}{CP} \times 100$

= $\frac{45}{675} \times 100$

$\frac{45 \cancel{15}^3}{675 \cancel{15}^3}$

= $\frac{20}{3} \%$

= $6\frac{2}{3} \%$

$$(10) \text{ CP} = \text{Rs } 1650$$

$$\text{gain} = 4\%$$

$$\text{SP} = ?$$

$$\text{SP} = \left(\frac{100 + \text{gain}\%}{100} \right) \times \text{CP}$$

$$= \left(\frac{100 + 4}{100} \right) \times 1650$$

$$= \frac{104}{100} \times 1650$$

$$= \text{Rs. } 22 \times 33 = \text{Rs. } 1716 \text{ Ans.}$$

$$(11) \text{ CP} = \text{Rs } 875$$

$$\text{loss} = 12\%$$

$$\text{SP} = ?$$

$$\text{SP} = \left(\frac{100 - \text{loss}\%}{100} \right) \times \text{CP}$$

$$= \left(\frac{100 - 12}{100} \right) \times 875$$

$$= \frac{88}{100} \times 875$$

$$= 22 \times 35 = \text{Rs. } 770 \text{ Ans.}$$

$$(3) \text{ SP} = \text{Rs. } 1596$$

$$\text{gain} = 12\%$$

$$\text{CP} = ?$$

$$\text{CP} = \left(\frac{100}{100 + \text{gain}\%} \right) \times \text{SP}$$

$$= \left(\frac{100}{100 + 12} \right) \times 1596$$

(11)

$$= \frac{100 - 25}{112} \times \frac{39957}{1596}$$

$$= \text{Rs. } 25 \times 27 = \text{Rs. } 1425$$

(11) $SP = \text{Rs. } 675.60$

loss = 4%

CP = ?

$$CP = \left(\frac{100}{100 - \text{loss}\%} \right) \times SP$$

$$= \left(\frac{100}{100 - 4} \right) \times 675.60$$

$$= \frac{100}{96} \times \frac{11260}{100}$$

$$= \text{Rs. } \frac{11260}{96} = \text{Rs. } 703.75 \text{ Ans.}$$

(4)

CP of the car = Rs. 73500

Repair charge = Rs. 10,300

Insurance = Rs. 2600

Total CP = Rs. (73500 + 10,300 + 2600)

= Rs. 86400

SP = Rs. 84200

$$\text{Loss \%} = \left(\frac{\text{Loss}}{\text{Total CP}} \times 100 \right) \%$$

$$= \frac{2160}{\cancel{86400}^{270305}} \times 100$$

108
+2.2

$$= \frac{2}{2} \% = 2\frac{1}{2} \% \text{ Ans.}$$

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Assignment - No. 25

Class - VIIIth.

Ch. 10

Sub - Maths

By, C. B. Kumar

Exercise - 10(A)

- (1) The cost price of 12 Candles is equal to the selling price of 15 Candles. Find the loss percent.
- (2) By selling 125 Cassettes, a man gains an amount equal to the selling price of 5 Cassettes. Find the gain percent.
- (3) A vendor purchased Bananas at ₹ 40 per dozen and sold them at 10 for ₹ 26. Find his gain or loss percent.
- (4) A cycle was sold at a gain of 10%. Had it been sold for ₹ 260 more, the gain would have been 14%. Find the cost price of the cycle.
- (5) If the selling price of a T.V is equal to $\frac{6}{5}$ of its cost price. Find the gain percent.

Solution - Assignment - No. 25

(1) Let - CP of one candle be x and
SP of one candle be y .

Now CP of 12 candle = SP of 15 candles

$$= 12x = 15y$$

$$\frac{x}{y} = \frac{15}{12}, \quad \frac{y}{x} = \frac{12}{15}$$

$$\text{Loss} = \text{CP} - \text{SP}$$

$$= x - y$$

$$\text{Loss\%} = \frac{\text{Loss}}{\text{CP}} \times 100$$

$$= \frac{x - y}{x} \times 100$$

$$= \left(\frac{x}{x} - \frac{y}{x} \right) \times 100$$

$$= \left(1 - \frac{12}{15} \right) \times 100$$

$$= \left(\frac{15 - 12}{15} \right) \times 100$$

$$= \frac{3}{15} \times 100 = 20\% \text{ Ans.}$$

(2) Let - SP of one Cassette be x

$$\text{SP of 5 Cassette} = 5x$$

$$\text{SP of 125 Cassette} = 125x$$

$$\text{Gain} = \text{SP} - \text{CP}$$

$$\text{CP} = \text{SP} - \text{Gain}$$

$$= 125x - 5x$$

$$= 120x$$

$$\text{Gain\%} = \frac{\text{Gain}}{\text{CP}} \times 100$$

$$= \frac{5x}{120x} \times 100$$

$$= \frac{25}{6} \% = 4 \frac{1}{6} \% \text{ Ans}$$

(3) The L.C.M of purchased banana
12 and 10 is 60

CP of 12 bananas be Rs. 40

CP of 1 banana = $\frac{\text{Rs. } 40}{12}$

CP of 60 banana = $\text{Rs. } \frac{40}{12} \times 60$

SP of 10 bananas = Rs. 200

SP of 1 banana = Rs. 20

SP of 60 banana = $\frac{\text{Rs. } 20}{10}$

= Rs. 216

$$SP > CP$$

$$\begin{aligned}\text{Gain} &= SP - CP \\ &= \text{Rs. } (216 - 200) \\ &= \text{Rs. } 16\end{aligned}$$

$$\begin{aligned}\text{Gain\%} &= \frac{\text{Gain}}{CP} \times 100 \\ &= \frac{16}{200} \times 100 \\ &= 8\% \quad \underline{\text{Ans.}}\end{aligned}$$

(4) Let the CP of cycle be Rs. x ,
Gain = 10%.

$$\begin{aligned}SP &= \left(\frac{100 + \text{Gain\%}}{100} \right) \times CP \\ &= \left(\frac{100 + 10}{100} \right) \times x \\ &= \frac{110}{100} \times x = \frac{11}{10} x\end{aligned}$$

Gain = 14%.

$$\begin{aligned}SP &= \left(\frac{100 + \text{Gain\%}}{100} \right) \times CP \\ &= \left(\frac{100 + 14}{100} \right) \times x.\end{aligned}$$

$$= \frac{114 \cancel{27}}{50} \times x = \frac{27}{50} x$$

Now $\frac{27}{50} x - \frac{11}{10} x = 260$

$$= \frac{27x - 50x}{50} = 260$$

$$= \frac{2x}{50} = 260$$

$$x = \frac{250 \times 50}{2}$$

$$= \text{Rs } 6500$$

Hence CP = Rs 6500. Ans

(5) Let the CP of T.V be Rs. x .

$$SP = \frac{6}{5} x$$

$$\text{gain} = SP - CP$$

$$= \frac{6}{5} x - x$$

$$= \frac{6x - 5x}{5} = \frac{1}{5} x$$

$$\text{Gain\%} = \frac{\text{Gain}}{CP} \times 100$$

$$= \frac{x}{5} \times 100$$

$$= \frac{x}{5} \times 100 = 20\% \text{ Ans}$$

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Assignment No. 26

sub - Maths.

Class VIII th.

by - C. B. Kumar

Ch - 10

Exercise - 10 'B'

- (1) The marked price of a water cooler is ₹ 4650. The shopkeeper offers an off season discount of 18% on it. Find its selling price?
- (2) After allowing a discount of 8% on a toy, it is sold for ₹ 216.20. Find the marked price of the toy.
- (3) A dealer bought a fan for ₹ 1080. After allowing a discount of 25% of its marked price he gains 25%. Find the marked price of the fan.
- (4) The marked price of a T.V is ₹ 18500. A dealer allows two successive discounts of 20% and 5%. For how much is the T.V. available?

Solution Assignment - No-26

(1) Marked Price of water cooler be

$$\text{Discount} = 18\% \text{ of M.P.}$$

$$= 18\% \text{ of } 4650$$

$$= \frac{18}{100} \times 4650$$

$$= \text{Rs. } 837$$

$$\text{S.P.} = \text{M.P.} - \text{discount}$$

$$= \text{Rs. } (4650 - 837)$$

$$= \text{Rs. } 3813 \text{ Ans.}$$

(2) S.P. of a toy = 216.20

$$\text{Discount} = 8\%$$

$$\text{M.P.} = ?$$

$$\text{S.P.} = \text{M.P.} - \text{discount}$$

Let the M.P. be x

$$\text{Now } x - \frac{8}{100}x$$

$$= x - \frac{2x}{25} = \frac{25x - 2x}{25} = \frac{23}{25}x$$

A/P.

$$\frac{23}{25}x = 216.20$$

$$x = \frac{5405}{23 \times 100} \times 25$$

$$= \frac{5405}{23} = \text{Rs. } 235 \text{ Ans.}$$

(3) Cost price of the fan = Rs 1080
gain% = 25%

$$\therefore SP = \left(\frac{100 + \text{gain}\%}{100} \right) \times CP$$

$$= \frac{100 + 25}{100} \times 1080$$

$$= \frac{125}{100} \times 1080$$

$$= \text{Rs. } 1350$$

Let the M.P be x .

discount = 25% of x

$$= \frac{25}{100} \times x = \frac{1}{4}x$$

$$SP = MP - \text{discount}$$

$$1350 = x - \frac{1}{4}x$$

$$= \frac{4x - x}{4}$$

$$1350 = \frac{3}{4}x$$

$$x = \frac{450 \times 1350}{3}$$

$$= \text{Rs. } 1800$$

\therefore MP = Rs. 1800 Ans.

(4) M.P of the T.V = Rs 18500

First-discount = 20%.

Now 20% of 18500

$$= \frac{20}{100} \times 18500$$

$$= \text{Rs. } 3700$$

Price after the first discount

$$= \text{Rs. } (18500 - 3700)$$

$$= \text{Rs. } 14800$$

Second discount = 5% of 14800

$$= \frac{5}{100} \times 14800$$

$$= \text{Rs. } 740$$

Price after the second discount

$$= \text{Rs. } (14800 - 740)$$

$$= \text{Rs. } 14060 \text{ Ans.}$$

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Assignment - No. 27

Sub - Maths

Class - VIII th.

by - C. B. Kumar.

Ch - 10

Exercise - 10 (c)

- (1) The list price of a refrigerator is Rs. 14650 if 6% is charged as sales tax find the cost of the refrigerator. ?
- (2) Tanvy bought a watch for ₹ 1980 including vat at 10%. Find the original price of the watch. ?
- (3) The sale price of a T.V set including vat is Rs. 27000. If the vat is charged at 8% of the list price. What is the list price of the T.V set.
- (4) Malti bought a VCR for ₹ 19980 including vat. If the original price of VCR be Rs 18500. Find the rate of vat. ?

①

Solution - Assignment No. 27

(1) List price of the refrigerator = Rs 14650

Sales tax = 6% of Rs 14,650

$$= \text{Rs} \left(\frac{63}{100} \times 14,650 \right)$$

$$= \text{Rs. } 879$$

Bill Amount = Rs. (14650 + 879)

$$= \text{Rs. } 15529$$

Hence the cost of the refrigerator is

Rs 15,529. Ann.

(2) Let the original price of watch be, x

$$\text{vat} = 10\% \text{ of } x$$

$$= \text{Rs} \left(\frac{10}{100} \times x \right)$$

$$= \text{Rs} \frac{1}{10} x$$

Price including vat = $x + \frac{1}{10} x$.

$$= \frac{10x + x}{10} = \frac{11}{10} x$$

$$\text{Now } \frac{11}{10} x = 1980$$

$$x = \frac{1980 \times 10}{11} = \text{Rs. } 1800$$

②

Hence the original price of watch is
Rs 1800 Ann

(3) Let the sale price of the T.V set be Rs. x

$$\text{vat} = 8\% \text{ of } x$$

$$= \text{Rs.} \left(\frac{8}{100} \times x \right)$$

$$= \text{Rs.} \frac{2}{25} x$$

$$\therefore \text{Price including vat} = x + \frac{2}{25} x$$

$$= \frac{25x + 2x}{25}$$

$$= \frac{27x}{25}$$

$$\text{Now } \frac{27x}{25} = 27000$$

$$x = \frac{27000 \times 25}{27}$$

$$= \text{Rs.} 25,000$$

Hence the list price of the T.V set is

Rs. 25000 Ann

(4) Let the rate of vat be $x\%$.

$$\text{Then } 18500 + x\% \text{ of } 18500 = 19980$$

$$x\% \text{ of } 18500 = 19986 - 18500$$

$$\frac{x}{100} \times 18500 = 1486$$

$$185x = 1486$$

$$x = \frac{1486 \times 100}{185}$$

$$= 80\%$$

Thus the Rate of Valr = 80%

Ans

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Assignment No. 21

Class VIIIth

Ch. 9

Exercise 9 (A)

Sub - Maths

by . C. B. Kumar

- (1) Express the following as a fraction.
(i) 48%. (ii) 2.5%.
- (2) Express the following as a decimal.
(i) 6%. (ii) 125%.
- (3) Express the following as a Percentage.
(i) $\frac{9}{25}$ (ii) $\frac{12}{5}$
- (4) Convert the ratio 4:5 to Percentage.
- (5) Express 125% as a ratio.
- (6) Which is the largest - is $6\frac{2}{3}\%$, $\frac{2}{20}$ and 0.14
- (7) What percent of 150 is 96
- (8) Find $4\frac{1}{2}\%$ of ₹ 3600
- (9) If 16% of a number is 72, find the ~~other~~ number.
- (10) A man saves 18% of his monthly income. If the saving is ₹ 8780 p.m. what is his Monthly Income?

Solution - Assignment - No. 21

$$(1) (i) 48\% = \frac{48}{100} \times 12 = \frac{12}{25} \text{ Ans.}$$

$$(ii) 2.5\% = \frac{25}{100} = \frac{25}{100 \times 10} = \frac{1}{40} \text{ Ans.}$$

$$(2) (i) 6\% = \frac{6}{100} = 0.06 \text{ Ans.}$$

$$(ii) 125\% = \frac{125}{100} = 1.25 \text{ Ans.}$$

$$(3) (i) \frac{9}{25} = \left(\frac{9}{25} \times 100 \right) \% = (9 \times 4) \% = 36\% \text{ Ans}$$

$$(ii) \frac{12}{5} = \left(\frac{12}{5} \times 20 \right) \% = (12 \times 20) \% = 240\% \text{ Ans}$$

$$(4) 4:5$$

$$\text{written as } = \frac{4}{5} = \left(\frac{4}{5} \times 100 \right) \% = 80\% \text{ Ans}$$

$$(5) 125\% = \frac{125}{100} \times \frac{5}{4} = \frac{5}{4} = 5:4 \text{ Ans.}$$

(6) We have

$$6\frac{2}{3}\% = \frac{20}{3} \times \frac{1}{100} = \frac{1}{15} = 0.06$$

$$\text{Also } \frac{3}{20} = 0.15$$

The third number is 0.14
clearly 0.15 is largest -

Hence $\frac{3}{20}$ is largest - Ans.

(7) Let the percent be x .

$$\therefore x\% \text{ of } 150 = 96$$

$$\therefore \frac{x}{100} \times 150 = 96$$

$$\therefore \frac{3x}{2} = 96$$

$$\therefore 3x = 96 \times 2$$

$$\therefore x = \frac{96 \times 2}{3} = 64\%$$

(8) $4\frac{1}{2}\%$ of ₹ 2600

$$= \frac{9}{2}\% \text{ of } 2600$$

$$= \frac{9 \times 2600}{2 \times 100} = \text{₹ } 117$$

$$= \text{₹ } 117$$

(9) Let the number be x

$$16\% \text{ of } x = 72$$

$$\frac{16}{100} \times x = 72$$

$$16x = 72 \times 100$$

$$x = \frac{72 \times 100}{16} = 450$$

Hence The Required. NO. is 450 Ans

(10) Let - his monthly income be ₹ x .

His saving = 18% of x .

$$= \frac{18}{100} \times x = \frac{9x}{50}$$

Now $\frac{9x}{50} = 3780$

$$9x = 3780 \times 50$$

$$x = \frac{3780 \times 50}{9}$$

$$= ₹ 21000$$

Hence man. Monthly income = ₹ 21000
Ans.

Emmanuel School.

Assignment - No - 22

Sub - Maths.

Class - VIII Th.
Ch - 9

by. @. B. Kumar

Exercise 9 A (ii)

- (1) A football team wins 7 games, which is 35% of the total games played. How many games were played in all?
- (2) Amit was given an increment of 20% on his salary. If the new salary is ₹ 30600, what was his salary before the increment?
- (3) A's income is 20% less than that of B. By what percent is B's income more than A's?
- (4) The price of petrol goes up 10%. By how much percent must a motorist reduce the consumption of petrol so that the expenditure on it remain unchanged?
- (5) The population of town increases by 8% annually. If the present population is 24000, what was it a year ago?
- (6) The value of machine depreciates every year by 20%. If the present value of the machine be ₹ 160000, what was its value last year?

Solution — Assignment - No. 22.

(1) Let the total number of played games be x .

$$\therefore 25\% \text{ of } x = 7$$

$$\frac{25}{100} \times x = 7$$

$$25x = 7 \times 100$$

$$x = \frac{7 \times 100}{25} = 28$$

Hence the total number of played games

(2) Let the Amul's old salary = 20 Amul.
The salary after increment be x .

The salary after increment = $(x + 20\% \text{ of } x)$

$$= x + \frac{20}{100} \times x$$

$$= x + \frac{1}{5}x$$

$$= \frac{5x + x}{5} = \frac{6x}{5}$$

As to question,

$$\frac{6x}{5} = 30600$$

$$6x = 30600 \times 5$$

$$x = \frac{30600 \times 5}{6} = ₹ 25500$$

Hence Amul's old salary = ₹ 25500

(3) Let the B income be x .

$$A \text{ income} = x - 20\% \text{ of } x$$

$$= x - \frac{20}{100}x$$

$$= x - \frac{1}{5}x = \frac{5x - x}{5} = \frac{4x}{5}$$

$$B \text{ income more than } A = x - \frac{4x}{5}$$

$$= \frac{5x - 4x}{5} = \frac{1}{5}x$$

Percent of B's income more than A.

$$= \frac{\frac{1}{5}x}{\frac{4x}{5}} \times 100 = \frac{1x}{5} \times \frac{5}{4x} \times 100$$

$$= 25\% \text{ Ans.}$$

(4) Let the consumption of petrol originally be x unit and its cost be Rs 100

New cost of 1 unit of petrol = Rs $(100 + 10\% \text{ of } 100)$

$$= 100 + \frac{10}{100} \times 100$$

$$= \text{Rs } 110$$

Now Rs 110 will yield 1 unit of petrol.

Rs. 1 will yield $\frac{1}{110}$ unit of petrol

Rs. 100 will yield $\frac{1 \times 100}{110} = \frac{10}{11}$ unit

Now Reduction in consumption = $(1 - \frac{10}{11})$ unit
 $= \frac{11-10}{11} = \frac{1}{11}$ unit

Percentage of Reduction = $(\frac{1}{11} \times \frac{1}{1} \times 100)\%$
 $= \frac{100}{11}\% = 9\frac{1}{9}\%$

Hence A motorist must Reduce the consumption of petrol by $9\frac{1}{9}\%$.

(5) Let the one year ago population of town be x .

The present population = $(x + 8\% \text{ of } x)$
 $= x + \frac{8^2}{100}x$
 $= x + \frac{2x}{25}$
 $= \frac{25x + 2x}{25} = \frac{27x}{25}$

Now,

$$\frac{27x}{25} = 54000$$

$$27x = 54000 \times 25$$

$$x = \frac{54000 \times 25}{27} = 50,000$$

Hence 1 year ago population of town,

be. 50,000 Ans

(6) Let the value of machine last year be x

Then present value $\leftarrow x - 20\% \cdot x$

$$= x - \frac{20}{100} x$$

$$= x - \frac{x}{5} = \frac{5x - x}{5}$$

$$= \frac{4x}{5}$$

Now

$$\frac{4x}{5} = 1,60,000$$

$$4x = 1,60,000 \times 5$$

$$x = \frac{1,60,000 \times 5}{4}$$

$$= ₹ 2,00,000$$

Hence the value of Machine last-year was. $₹ 2,00,000$ Ans

Emmanuel school.

Assignment No. 23

Class - VIIIth.

Ch - 9

Sub - Maths -

by. C. B. Kumar

Exercise. 9 (A) (III)

- (1) An alloy contains 40% copper, 32% nickel, and rest zinc. Find the mass of zinc in one kg of the alloy.
- (2) Balanced diet should contain 12% of proteins, 25% of fats and 63% of carbohydrates. If a child need 2600 calories in his food daily. Find in calories the amount of each of these in his daily food intake.
- (3) Divide ₹ 7000 among A, B and C. Such that A gets 50% of what B gets and B gets 50% of what C gets.
- (4) The salary of an officer is increased by 25%. By what percent should the new salary be decreased to restore the original salary?

Solution. - Assignment No. 23

(1)

$$\text{Mass of Alloy} = 1 \text{ kg} = 1000 \text{ g}$$

$$\text{Copper} = 40\%$$

$$\text{Nickel} = 32\%$$

$$\text{Zinc} = \{100 - (40 + 32)\}\%$$

$$= (100 - 72)\%$$

$$= 28\%$$

$$\text{Mass of Zinc} = 28\% \text{ of } 1 \text{ kg}$$

$$= \frac{28}{100} \times 1000 \text{ g}$$

$$= 280 \text{ g}$$

Hence Mass of Zinc = 280g Ans.

(2) Needed calories = 2600 calories.

$$\text{Amount of Protein} = 12\% \text{ of } 2600$$

$$= \frac{12}{100} \times 2600$$

$$= 312 \text{ Cal.}$$

$$\text{Amount of fat} = 25\% \text{ of } 2600$$

$$= \frac{25}{100} \times 2600$$

$$= 650 \text{ Cal.}$$

$$\text{Amount of carbohydrate} = 63\% \cdot 2600$$

$$= \frac{63}{100} \times 2600$$

$$= 1638 \text{ cal.}$$

$$\text{Hence Amount of protein} = 312 \text{ cal.}$$

$$\text{Amount of fat} = 650 \text{ cal.}$$

$$\text{Amount of carbohydrate} = 1638 \text{ cal.}$$

Ans.

(3) Let Rs. x be the amount of money received, by C.

The Amount of money B gets = 50% of C.

$$\begin{aligned} \text{The Amount of money A gets} &= \frac{50}{100} \times x \\ &= \frac{1}{2}x \end{aligned}$$

$$= 50\% \text{ of B gets.}$$

$$= \frac{50}{100} \times \frac{1}{2}x = \frac{1}{4}x$$

A/q

$$x + \frac{1}{2}x + \frac{1}{4}x = 7000$$

$$\frac{4x + 2x + x}{4} = 7000$$

$$\frac{7x}{4} = 7000$$

$$7x = 7000 \times 4$$

$$x = \frac{7000 \times 4}{7}$$

$$x = \text{Rs. } 4000$$

$$C \text{ gets} = \text{Rs. } 4000$$

$$B \text{ gets} = \frac{1}{2}x = \frac{1}{2} \times 4000 = \text{Rs. } 2000$$

$$A \text{ gets} = \frac{1}{4}x = \frac{1}{4} \times 4000 = \text{Rs. } 1000$$

Ans

④ Let the original salary be Rs 100
Increment = 25%

$$\text{After Increment - New Salary} = 100 + 25\% \text{ of } 100$$

$$= 100 + \frac{25}{100} \times 100$$

$$= \text{Rs. } 125$$

Restore the original salary.

$$\text{Salary decreased} = \frac{2}{7} (125 - 100)$$

$$= \text{Rs. } 25$$

$$\text{decreased } \% = \frac{25}{125} \times 100$$

$$= 20\%$$

Hence, the new salary must be reduced by 20% to restore the original salary. Ans.

Emmanuel school

Assignment No. 20

class - VIIIth

Ch. 7.

sub. maths

by. C. B. Kumar.

Exercise. 7 'D'

Factorise.

(1) $p^2 + 6p + 8$

(2) $q^2 - 10q + 21$

(3) $y^2 - 21y + 90$

(4) $x^2 - 9x + 20$

(5) $y^2 + 7y - 144$

(6) $y^2 + y - 72$

(7) $3z^2 - 10z + 8$

(8) $6p^2 + 11p - 10$

(9) $6x^2 - 5x - 6$

(10) $7x^2 - 19x - 6$

solutions - Assignment - No. 20

$$\begin{aligned}(1) \quad p^2 + 6p + 8 &= p^2 + 4p + 2p + 8 \\ &= p(p+4) + 2(p+4) \\ &= (p+4)(p+2)\end{aligned}$$

$$\begin{aligned}(2) \quad q^2 - 10q + 21 &= q^2 - 3q - 7q + 21 \\ &= q(q-3) - 7(q-3) \\ &= (q-3)(q-7)\end{aligned}$$

$$\begin{aligned}(3) \quad y^2 - 21y + 90 &= y^2 - 6y - 15y + 90 \\ &= y(y-6) - 15(y-6) \\ &= (y-6)(y-15)\end{aligned}$$

$$\begin{aligned}(4) \quad x^2 - 9x + 20 &= x^2 - 4x - 5x + 20 \\ &= x(x-4) - 5(x-4) \\ &= (x-4)(x-5)\end{aligned}$$

$$\begin{aligned}(5) \quad y^2 + 7y - 144 &= y^2 - 9y + 16y - 144 \\ &= y(y-9) + 16(y-9) \\ &= (y-9)(y+16)\end{aligned}$$

$$(6) y^2 + y - 72 = y^2 + 9y - 8y - 72$$

$$y(y+9) - 8(y+9)$$

$$(y+9)(y-8)$$

$$(7) 3z^2 - 10z + 8 = 3z^2 - 6z - 4z + 8$$

$$= 3z(z-2) - 4(z-2)$$

$$= (z-2)(3z-4)$$

$$(8) 6p^2 + 11p - 10 = 6p^2 - 4p + 15p - 10$$

$$= 2p(3p-2) + 5(3p-2)$$

$$= (3p-2)(2p+5)$$

$$(9) 6x^2 - 5x - 6 = 6x^2 - 9x + 4x - 6$$

$$= 3x(2x-3) + 2(2x-3)$$

$$= (2x-3)(3x+2)$$

$$(10) 7x^2 - 19x - 6 = 7x^2 - 21x + 2x - 6$$

$$= 7x(x-3) + 2(x-3)$$

$$= (x-3)(7x+2)$$

Emmanuel School.

Assignment: No-19

Class: VIIIth.

Ch. 7

Sub - Maths

by. e. B. Kumar

Exercise - 7. 'c'

Factorise: —

(1) $x^2 + 8x + 16$

(2) $1 + 2x + x^2$

(3) $x^2 + 6ax + 9a^2$

(4) $36a^2 - 36a + 9$

(5) $x^2 + x + \frac{1}{4}$

(6) $p^2 - 10p + 25$

(7) $1 - 6x + 9x^2$

(8) $16x^2 - 24x + 9$

(9) $a^2b^2 - 6abc + 9c^2$

(10) $(l+m)^2 - 4lm$

Solutions - Assignment - No. 19

$$(1) \quad x^2 + 8x + 16 = x^2 + 2 \times x \times 4 + 4^2 \\ = (x+4)^2$$

$$\therefore x^2 + 8x + 16 = (x+4)^2$$

$$(2) \quad 1 + 2x + x^2 = (1^2 + 2 \times 1 \times x + x^2) \\ = (1+x)^2$$

$$\therefore 1 + 2x + x^2 = (1+x)^2$$

$$(3) \quad x^2 + 6ax + 9a^2 = x^2 + 2 \times x \times 3a + (3a)^2 \\ = (x+3a)^2$$

$$\therefore x^2 + 6ax + 9a^2 = (x+3a)^2$$

$$(4) \quad 36a^2 - 36a + 9 = (6a)^2 - 2 \times 6a \times 3 + 3^2 \\ = (6a-3)^2$$

$$\therefore 36a^2 - 36a + 9 = (6a-3)^2$$

$$(5) \quad z^2 + z + \frac{1}{4} = z^2 + 2 \times z \times \frac{1}{2} + \left(\frac{1}{2}\right)^2 \\ = \left(z + \frac{1}{2}\right)^2$$

$$\therefore z^2 + z + \frac{1}{4} = \left(z + \frac{1}{2}\right)^2$$

$$(6) p^2 - 10p + 25 = p^2 - 2 \times p \times 5 + 5^2$$

$$= (p-5)^2$$
$$\therefore p^2 - 10p + 25 = (p-5)^2$$

$$(7) 1 - 6x + 9x^2 = 1^2 - 2 \times 1 \times 3x + (3x)^2$$

$$= (1-3x)^2$$

$$\therefore 1 - 6x + 9x^2 = (1-3x)^2$$

$$(8) 16x^2 - 24x + 9 = (4x)^2 - 2 \times 4x \times 3 + 3^2$$

$$= (4x-3)^2$$

$$\therefore 16x^2 - 24x + 9 = (4x-3)^2$$

$$(9) a^2b^2 - 6abc + 9c^2 = (ab)^2 - 2 \times ab \times 3c + (3c)^2$$

$$= (ab-3c)^2$$

$$\therefore a^2b^2 - 6abc + 9c^2 = (ab-3c)^2$$

$$(10) (l+m)^2 - 4lm = l^2 + m^2 + 2lm - 4lm$$

$$= l^2 + m^2 - 2lm$$

$$= (l-m)^2$$

$$\therefore (l+m)^2 - 4lm = (l-m)^2$$

Emmanuel school

Assignment No. 20

class - VIIIth

Ch. 7.

sub. maths

by. C. B. Kumar.

Exercise. 7 'D'

Factorise.

(1) $p^2 + 6p + 8$

(2) $q^2 - 10q + 21$

(3) $y^2 - 21y + 90$

(4) $x^2 - 9x + 20$

(5) $y^2 + 7y - 144$

(6) $y^2 + y - 72$

(7) $3z^2 - 10z + 8$

(8) $6p^2 + 11p - 10$

(9) $6x^2 - 5x - 6$

(10) $7x^2 - 19x - 6$

solutions - Assignment - No. 20

$$\begin{aligned}(1) \quad p^2 + 6p + 8 &= p^2 + 4p + 2p + 8 \\ &= p(p+4) + 2(p+4) \\ &= (p+4)(p+2)\end{aligned}$$

$$\begin{aligned}(2) \quad q^2 - 10q + 21 &= q^2 - 3q - 7q + 21 \\ &= q(q-3) - 7(q-3) \\ &= (q-3)(q-7)\end{aligned}$$

$$\begin{aligned}(3) \quad y^2 - 21y + 90 &= y^2 - 6y - 15y + 90 \\ &= y(y-6) - 15(y-6) \\ &= (y-6)(y-15)\end{aligned}$$

$$\begin{aligned}(4) \quad x^2 - 9x + 20 &= x^2 - 4x - 5x + 20 \\ &= x(x-4) - 5(x-4) \\ &= (x-4)(x-5)\end{aligned}$$

$$\begin{aligned}(5) \quad y^2 + 7y - 144 &= y^2 - 9y + 16y - 144 \\ &= y(y-9) + 16(y-9) \\ &= (y-9)(y+16)\end{aligned}$$

$$(6) y^2 + y - 72 = y^2 + 9y - 8y - 72$$

$$y(y+9) - 8(y+9)$$

$$(y+9)(y-8)$$

$$(7) 3z^2 - 10z + 8 = 3z^2 - 6z - 4z + 8$$

$$= 3z(z-2) - 4(z-2)$$

$$= (z-2)(3z-4)$$

$$(8) 6p^2 + 11p - 10 = 6p^2 - 4p + 15p - 10$$

$$= 2p(3p-2) + 5(3p-2)$$

$$= (3p-2)(2p+5)$$

$$(9) 6x^2 - 5x - 6 = 6x^2 - 9x + 4x - 6$$

$$= 3x(2x-3) + 2(2x-3)$$

$$= (2x-3)(3x+2)$$

$$(10) 7x^2 - 19x - 6 = 7x^2 - 21x + 2x - 6$$

$$= 7x(x-3) + 2(x-3)$$

$$= (x-3)(7x+2)$$

Emmanuel School

Assignment No. 17

Sub. Maths

Class. VIII. 11

by. C. B. Kumar

Ch. = 7

Exercise. 7 'A'

(1) (i) $12x + 15$ (ii) $24x^2 - 36x^2y$

(2) (i) $14x^2 + 21x^2y - 28x^2y^2$

(ii) $12a^3b^3 - 27a^2b^3 + 36a^3b^2$

(3) (i) $x^3(a-b) + x^2(a-b)$

(ii) $2a + 6b - 3(a+3b)^2$

(4) (i) $(x+y)(2x+5) - (x+y)(x-3)$

(ii) $12(2x-3y)^2 - 16(2x-2y)$

(5) $ax + bx + a^2 + b^2$

(6) $x^2 - xz + xy - yz$

(7) $y^2 - xy(1-x) - x^3$

(8) $(ax+by)^2 + (bx-ay)^2$

(9) $ab(x^2+y^2) - xy(a^2+b^2)$

Solutions - Assignment - No. 17.

$$(1) (i) 12x + 15 \\ = 3(4x + 5)$$

$$(ii) 24x^2 - 36x^2y \\ 12x^2(2 - 3y)$$

$$(2) (i) 14x^2 + 21x^2y - 28x^2y^2 \\ 7x^2(2 + 3x^2y - 4y^2)$$

$$(ii) 18a^2b^3 - 27a^2b^3 + 36a^3b^2 \\ 9a^2b^2(2a - 3b + 4a)$$

$$(3) (i) x^3(2a - b) + x^2(2a - b) \\ (2a - b)(x^3 + x^2), (2a - b)x^2(x + 1) \\ x^2(x + 1)(2a - b)$$

$$(ii) 2a + 6b - 3(a + 3b)^2 \\ 2(a + 3b) - 3(a + 3b)^2 \\ (a + 3b)(2 - 3(a + 3b)) \\ (a + 3b)(2 - 3a - 9b)$$

$$(4) (i) (x+y)(2x+5) - (x+y)(x+3)$$

$$(x+y) \{ (2x+5) - (x+3) \}$$

$$(x+y) \{ 2x+5-x-3 \}$$

$$(x+y) (x+2)$$

$$(ii) 12(2x-3y)^2 - 16(3y-2x)$$

$$12(2x-3y)^2 + 16(2x-3y)$$

$$(2x-3y) \{ 12(2x-3y) + 16 \}$$

$$(2x-3y) (24x-26y+16)$$

$$(4) (i) (x+y)(2x+5) - (x+y)(x+3)$$

$$(x+y) \{ (2x+5) - (x+3) \}$$

$$(x+y) (2x+5-x-3)$$

$$(x+y) (x+2)$$

$$(5) ar + br + ar + br$$

$$r(a+b) + r(a+b)$$

$$(r+r) (a+b)$$

$$(6) x^2 + xz + xy - yz$$

$$x^2 + xy + xz - yz, (x^2 + xy) - (xz + yz)$$

$$x(x+y) + z(x+y)$$

$$(x+y) (x+z)$$

$$(7) \quad x^2 - xy(1-x) - x^3$$

$$x^2 - xy + x^2y - x^3$$

$$x \left(\frac{x}{x} - y \right) + x^2 \left(\frac{x}{x} - x \right)$$

$$(x - y) (x + x^2)$$

$$(8) \quad (ax + by)^2 + (bx - ay)^2$$

$$(a^2x^2 + b^2y^2 + 2abxy) + (b^2x^2 + a^2y^2 - 2bxa y)$$

$$a^2x^2 + b^2y^2 + b^2x^2 + a^2y^2 + 2abxy - 2abxy$$

$$a^2x^2 + a^2y^2 + b^2x^2 + b^2y^2$$

$$a^2(x^2 + y^2) + b^2(x^2 + y^2)$$

$$(a^2 + b^2)(x^2 + y^2)$$

$$(9) \quad ab(x^2 + y^2) - xy(a^2 + b^2)$$

$$abx^2 + aby^2 - a^2xy - b^2xy$$

$$abx^2 - a^2xy + aby^2 - b^2xy$$

$$ax(bx - ay) + by(ay - bx)$$

$$ax(bx - ay) - by(bx - ay)$$

$$(bx - ay)(ax - by)$$

Assignment No. 18

Class VIII th.

Ch. 7.

Sub. Math

by. E. B. Ram

Exercise - 7 'B'

Factorise

(1) $x^2 - 36$

(2) $16a^2 - 225$

(3) $12x^2 - 27$

(4) $x^3 - 64x$

(5) $1 - (b-c)^2$

(6) $(2a+3b)^2 - 16c^2$

(7) $x^2 - y^2 - 2y - 1$

(8) $100 - (x-5)^2$

(9) Evaluate - $(405)^2 - (395)^2$

(10) Evaluate $\{(7.8)^2 - (2.2)^2\}$

Solution - Assignment - No. 18

$$\begin{aligned}(1) \quad & x^2 - 36 \\ & = x^2 - 6^2 \\ & = (x+6)(x-6)\end{aligned}$$

$$\begin{aligned}(2) \quad & 16a^2 - 225b^2 \\ & = (4a)^2 - (15b)^2 \\ & = (4a+15b)(4a-15b)\end{aligned}$$

$$\begin{aligned}(3) \quad & 12x^2 - 27 \\ & = 3(4x^2 - 9) \\ & = 3\{(2x)^2 - 3^2\} \\ & = 3(2x+3)(2x-3)\end{aligned}$$

$$\begin{aligned}(4) \quad & x^3 - 64x \\ & = x(x^2 - 64) \\ & = x(x^2 - 8^2) \\ & = x(x+8)(x-8)\end{aligned}$$

$$\begin{aligned}(5) \quad & 1 - (b-c)^2 \\ & = (1)^2 - (b-c)^2 \\ & = (1+b-c)(1-(b-c)) \\ & = (1+b-c)(1-b+c)\end{aligned}$$

$$(6) (2a+3b)^2 - 16c^2$$

$$(2a+3b)^2 - (4c)^2$$

$$(2a+3b+4c)(2a+3b-4c)$$

$$(7) x^2 - y^2 - 2y - 1$$

$$x^2 - (y^2 + 2y + 1)$$

$$x^2 - (y+1)^2$$

$$\{x^2 + (y+1)\} \{x^2 - (y+1)\}$$

$$(x^2 + y + 1)(x^2 - y - 1)$$

$$(8) 100 - (x-5)^2$$

$$(10)^2 - (x-5)^2$$

$$(10 + x - 5)(10 - (x - 5))$$

$$(5 + x)(10 - x + 5)$$

$$(5 + x)(15 - x)$$

$$(9) \{ (405)^2 - (395)^2 \}$$

$$= (405 + 395) (405 - 395)$$

$$= 800 \times 10$$

$$= 8000$$

$$(10) \{ (7.8)^2 - (2.2)^2 \}$$

$$= (7.8 + 2.2) (7.8 - 2.2)$$

$$= 10 \times 5.6$$

$$= 56$$

Emmanuel school-

Assignment -- 14

Sub - Math.

class - VIII th.

by - e. B. Kumar

Ch - 6

Exercise - 6B.

(1) Find each of the following products.

(i) $(3y-8) \times (5y-1)$

(ii) $(x^4+y^4) \times (x^2-y^2)$

(iii) $(x^2-a) \times (x-a)$

(iv) $(x^3-y^3) \times (x^2+y^2)$

(v) $(x^4 + \frac{1}{x^4}) \times (x + \frac{1}{x})$

(2) Find each of the following products

(i) $(x^2 - xy + y^2) \times (x - y)$

(ii) $(9x^2 - x + 15) \times (x^2 - 3)$

(iii) $(2x^2 + 3x - 7) \times (3x^2 - 5x + 4)$

(iv) $(9x^2 - x + 15) \times (x^2 - x - 1)$

Assignment - 13

Class - VIIIth

Ch - 6

Exercise - 6.A

Sub - Maths

by @B.Kumar

(1) Add.

(i) $5x - 8y + 2z$, $3z - 4y - 2x$, $6y - z - x$, $3x - 2z - y$

(ii) $6p + 4q - r + 3$, $2r - 5p - 6$, $11q - 7p + 2r - 1$
and $2q - 3r + 4$.

(2) Subtract

(i) $2a - 5b + 2c - 9$ from $3a - 4b - c + 6$

(ii) $5y^4 - 3y^3 + 2y^2 + y - 1$ from $4y^4 - 2y^3 - 6y^2 + y + 5$

(3) What must be subtracted from $3a^2 - 6ab - 3b^2 - 1$ to get $4a^2 - 7ab - 4b^2 + 1$

(4) The adjacent sides of a rectangle are $5x^2 - 3y^2$ and $x^2 + 2xy$ find the perimeter.

Assignment - 15

Class - VIIIth

Ch - 6

Exercise - 6.C

Sub - Maths

by @B.Kumar

(1) Divide.

(i) $(x^2 + 12x + 35)$ by $(x + 7)$

(ii) $(x^3 + 1)$ by $(x + 1)$

(iii) $(5x^3 - 12x^2 + 12x + 13)$ by $(x^2 - 3x + 4)$

(iv) $(2x^3 - 5x^2 + 8x - 5)$ by $(2x^2 - 3x + 5)$

(v) $(8x^4 + 10x^3 - 5x^2 - 4x + 1)$ by $(2x^2 + x - 1)$

(2) using division method show that $(x - 1)$ is a factor of $(x^3 - 1)$

(3) Find the quotient and remainder when $(7 + 15x - 13x^2 + 5x^3)$ is divided by $(4 - 3x + x^2)$

Assignment - 16
class VIII th.
ch - 6

Sub - Math.
by - C. B. Kumar.

Exercise - 6D

(1) Find the following product -

(i) $(x+6)(x+6)$ (ii) $(\frac{5}{6}a^2+2)(\frac{5}{6}a^2+2)$

(iii) $(2x-3y)(2x-3y)$ (iv) $(x-\frac{3}{x})(x-\frac{3}{x})$

(2) Expand (i) $(8a+3b)^2$, (ii) $(9x-10)^2$.

(3) Find the value of (i) 82^2-18^2 (ii) (14.7×153)

(iii) $\frac{198 \times 198 - 102 \times 102}{36}$

(4) if $(x-\frac{1}{x})=5$ Find the value of (i) $(x^2+\frac{1}{x^2})$
and (ii) $(x^4+\frac{1}{x^4})$

(5) if $(x+y)=12$ and $xy=14$ Find the value
of (x^2+y^2)