

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

Whole Numbers and Operations

Exercise 1

(Q1). Write the following number in words.

(a) 290,014

Word form: Two hundred and ninety thousand and fourteen.

(b) 433,453

Word form: Four hundred and thirty three thousand, four hundred and fifty three.

(c) 1,010,009

Words form: One million, ten thousand and nine.

(d) 9,871,653

Words form: Nine million, eight hundred and seventy-one thousands, six hundred and fifty-three.

(e) 1,252,140

Words form: One million, Two hundred and fifty-two thousands, one hundred and forty.

(f) 2,688,061

Words form: Two million, six hundred and eighty-eight thousand and sixty-one.

(g) 1,874,454

Words form: One million, eight hundred and seventy-four thousand, four hundred and fifty-four.

(h) 6,495,523

Words form: Six million, four hundred and ninety-five thousand, five hundred and twenty three.

(Q2) Write the following numbers in expanded form.

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(a) **131,441**

Expanded form: $100,000 + 30,000 + 1,000 + 400 + 40 + 1$

(b) **6,000,900**

Expanded form: $6,000,000 + 000,000 + 00,000 + 0,000 + 900 + 00 + 0$

(c) **4,949,181.**

Expanded form: $4,000,000 + 900,000 + 40,000 + 9,000 + 100 + 80 + 1$

(d) **6,466,456**

Expanded form: $6,000,000 + 400,000 + 60,000 + 6,000 + 400 + 50 + 6$

(e) **7,286,019**

Expanded form: $7,000,000 + 200,000 + 80,000 + 6,000 + 000 + 10 + 9$

(f) **9,479,321**

Expanded form: $9,000,000 + 400,000 + 70,000 + 9,000 + 300 + 20 + 1$

(g) **8,510,602**

Expanded form: $8,000,000 + 500,000 + 10,000 + 0000 + 600 + 00 + 2$

(h) **1,202,001**

Expanded form: $1,000,000 + 200,000 + 00,000 + 2,000 + 000 + 00 + 1$

(Q3) Match the column A with the column B.

Column A	Column B
(a) Eight million, seven thousand and eight hundred.	8,007,800
(b) Two hundred and seventy-eight thousands and seventy-eight.	278,078
(c) Eight million, eight hundred and eight thousands, eight hundred and eight	8,808,808
(d) Two million, seven thousand five hundred and five.	2,007,505
(e) Two million six thousand and two.	2,006,002

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(Q4) Write the value and place value of the coloured digits.

S.No	Number	Value	Place value
(a)	4 <u>5</u> 45445	500,000	Hundred thousand
(b)	98465 <u>3</u> 2	30	Tens
(c)	<u>6</u> 782456	6,000,000	Million
(d)	90 <u>8</u> 0714	80,000	Ten thousand
(e)	29 <u>9</u> 7924	90,000	Ten thousand
(f)	8425 <u>4</u> 19	400	Hundred
(g)	781765 <u>6</u>	6	ones
(h)	17012 <u>3</u> 2	30	Tens

(Q5) According to 2017 census, the population of Islamabad is 1,014,825.

- Write it in words.
- Write the place value of each digit.
- Write it in expanded form.

Answers

- Words form: One million, fourteen thousand, eight hundred and twenty Five.
- Place value of each digit.

Number	Place	Value
1,014,825	1,	1 million
	0,	0 hundred thousands
	1,	1 ten thousand
	4,	4 thousands
	8,	8 hundred
	2,	2 tens
	5,	5 ones

(c) Expanded form: $1,000,000 + 000,000 + 10,000 + 4000 + 800 + 20 + 5$

(Q6) The speed of light in vacuum is 299,792 kilometers per second.

- Write it in words.
- Write the place value of each digit.
- Write it in expanded form.

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Answers

(a) words form: Two hundred and ninety – nine thousand, seven hundred and ninety-two.

(b) Place value of each digit.

Number	Place	Value
299,792	2.	2 hundred thousands
	9.	9 ten thousands
	9.	9 thousands
	7.	7 hundred
	9.	9 tens
	2.	2 ones

(c) Expanded form: $200,000 + 90,000 + 9,000 + 700 + 90 + 2$

**Addition and Subtraction
Exercise 2**

1. Solve the following.

$\begin{array}{r} \text{(a)} \quad 1\ 0\ 0\ 7\ 0\ 0 \\ + \quad 2\ 9\ 1\ 5\ 6\ 2 \\ \hline 3\ 9\ 2\ 2\ 6\ 2 \end{array}$	$\begin{array}{r} \text{(b)} \quad 4\ 1\ 7\ 3\ 8\ 1 \\ + \quad 3\ 0\ 9\ 2\ 0\ 1 \\ \hline 7\ 2\ 6\ 5\ 8\ 2 \end{array}$
$\begin{array}{r} \text{(c)} \quad 5\ 9\ 1\ 7\ 2\ 7 \\ + \quad 7\ 0\ 2\ 9\ 2\ 9 \\ \hline 1\ 2\ 9\ 4\ 6\ 5\ 6 \end{array}$	$\begin{array}{r} \text{(d)} \quad 3\ 1\ 9\ 8\ 9\ 8 \\ + \quad 4\ 2\ 8\ 8\ 8\ 8 \\ \hline 7\ 4\ 8\ 7\ 8\ 6 \end{array}$
$\begin{array}{r} \text{(e)} \quad 7\ 6\ 6\ 4\ 4\ 2 \\ + \quad 6\ 1\ 1\ 2\ 2\ 2 \\ \hline 1\ 3\ 7\ 7\ 6\ 6\ 4 \end{array}$	$\begin{array}{r} \text{(f)} \quad 5\ 4\ 2\ 0\ 0\ 1 \\ + \quad 6\ 2\ 1\ 4\ 1\ 6 \\ \hline 1\ 1\ 6\ 3\ 4\ 1\ 7 \end{array}$

(Q2) Solve the following.

$\begin{array}{r} \text{(a)} \quad 2\ 0\ 9\ 8\ 5\ 6 \\ - \quad 2\ 0\ 5\ 6\ 6\ 0 \\ \hline 0\ 0\ 4\ 1\ 9\ 6 \end{array}$	$\begin{array}{r} \text{(b)} \quad 7\ 8\ 8\ 9\ 9\ 1 \\ - \quad 2\ 0\ 6\ 0\ 7\ 0 \\ \hline 5\ 8\ 2\ 9\ 2\ 1 \end{array}$
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5. Town A has population of 459,814 and town B has population of 325,919.

a) What is the total population of the two towns?

b) Which town has more population and how much?

Town A population = 4 5 9 8 1 4 Town B population = 3 2 5 9 1 9 $ \begin{array}{r} 459814 \\ + 325919 \\ \hline 785733 \end{array} $ (a) Total Population = 7 8 5 7 3 3	(b) Town A has more population = 133895 $ \begin{array}{r} 459814 \\ - 325919 \\ \hline 133895 \end{array} $
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6. The annual yield of a mango in one year is 656,565 kg. In the second year, the yield decreased by 100,984 kg. How much mango was produced in the second year?

Annual field of mango in 1st year = 656565 kg

2 year field decreased = 100984 kg

Mango field in the 2nd year = 555581 kg

$$\begin{array}{r} 5 14 16 \\ 6 \ 5 \ 6 \ 5 \ 6 \ 5 \\ - 1 \ 0 \ 0 \ 9 \ 8 \ 4 \\ \hline 5 \ 5 \ 5 \ 5 \ 8 \ 1 \end{array}$$

7. The government built 386,655 houses for the homeless in one year. The second year 24,521 fewer homes were built than the previous year. How many houses did the government build in both the years?

Govt. built in 1st year = 386655 Houses

Govt. built less in the 2nd year = 24521 Houses

Govt. built in the 2nd year = 362134 houses

Govt. built houses in both years = 748789 houses

$$\begin{array}{r} 3 \ 8 \ 6 \ 6 \ 5 \ 5 \\ - 2 \ 4 \ 5 \ 2 \ 1 \\ \hline 3 \ 6 \ 2 \ 1 \ 3 \ 4 \\ \hline 3 \ 8 \ 6 \ 6 \ 5 \ 5 \\ + 3 \ 6 \ 2 \ 1 \ 3 \ 4 \\ \hline 7 \ 4 \ 8 \ 7 \ 8 \ 9 \end{array}$$

8. Fatima has Rs 954,888 in her bank account. If she withdraws Rs 135,600 from the bank to buy a laptop, how much money was left with her?

Fatima has = 954,888 Rs

Fatima withdraw = 135,600 Rs

Money left = 819,288 Rs

$$\begin{array}{r} 14 \\ 9 \ 5 \ 4 \ 8 \ 8 \ 8 \\ - 1 \ 3 \ 5 \ 6 \ 0 \ 0 \\ \hline 8 \ 1 \ 9 \ 2 \ 8 \ 8 \end{array}$$

9. A factory owner gave Rs 448,870 as reward to his employees in one year. In the second year 437,995 rupees were given as reward.

(a) What is the total amount given as reward in both years.

Factory owner gave in one year = 448,870 Rs

Factory owner gave in the 2nd year = 437,995 Rs

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(b) 4,090

by 10	by100	by1000
$\begin{array}{r} 4090 \\ \times 10 \\ \hline 0000 \\ + 40900 \\ \hline 40900 \end{array}$	$\begin{array}{r} 4090 \\ \times 100 \\ \hline 0000 \\ + 00000 \\ + 409000 \\ \hline 409000 \end{array}$	$\begin{array}{r} 4090 \\ \times 1000 \\ \hline 0000 \\ 00000 \\ 000000 \\ + 4090000 \\ \hline 4090000 \end{array}$

(c) 97,509

by 10	by100	by1000
$\begin{array}{r} 97509 \\ \times 10 \\ \hline 00000 \\ + 975090 \\ \hline 975090 \end{array}$	$\begin{array}{r} 97509 \\ \times 100 \\ \hline 00000 \\ + 000000 \\ + 9750900 \\ \hline 9750900 \end{array}$	$\begin{array}{r} 97509 \\ \times 1000 \\ \hline 00000 \\ 000000 \\ 0000000 \\ + 97509000 \\ \hline 97509000 \end{array}$

(d) 269,472

by 10	by100	by1000
$\begin{array}{r} 269472 \\ \times 10 \\ \hline 000000 \\ + 2694720 \\ \hline 2694720 \end{array}$	$\begin{array}{r} 269472 \\ \times 100 \\ \hline 000000 \\ + 0000000 \\ + 26947200 \\ \hline 26947200 \end{array}$	$\begin{array}{r} 269472 \\ \times 1000 \\ \hline 0000000 \\ + 00000000 \\ + 000000000 \\ + 269472000 \\ \hline 269472000 \end{array}$

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(c) 852,118

by 10	by 100	by 1000
$\begin{array}{r} 852118 \\ \times \quad 10 \\ \hline 000000 \\ + 8521180 \\ \hline 8521180 \end{array}$	$\begin{array}{r} 852118 \\ \times \quad 100 \\ \hline 000000 \\ + 0000000 \\ + 85211800 \\ \hline 85211800 \end{array}$	$\begin{array}{r} 852118 \\ \times \quad 1000 \\ \hline 000000 \\ + 0000000 \\ + 00000000 \\ + 852118000 \\ \hline 852118000 \end{array}$

(2) Divide the following numbers by 10, 100, 1000

(a) $49000 \div 10 = 4900$ $49000 \div 100 = 490$ $49000 \div 1000 = 49$

$$\begin{array}{r} 4900 \\ 10 \overline{) 49000} \\ \underline{-40} \\ 90 \\ \underline{-90} \\ 0 \end{array}$$

$$\begin{array}{r} 490 \\ 100 \overline{) 49000} \\ \underline{-400} \\ 90 \\ \underline{-90} \\ 0 \end{array}$$

$$\begin{array}{r} 49 \\ 1000 \overline{) 49000} \\ \underline{-4000} \\ 9000 \\ \underline{-9000} \\ 0 \end{array}$$

(b) $78000 \div 10 = 7800$ $78000 \div 100 = 780$ $78000 \div 1000 = 78$

$$\begin{array}{r} 7800 \\ 10 \overline{) 78000} \\ \underline{-70} \\ 80 \\ \underline{-80} \\ 0 \end{array}$$

$$\begin{array}{r} 780 \\ 100 \overline{) 78000} \\ \underline{-700} \\ 800 \\ \underline{-800} \\ 0 \end{array}$$

$$\begin{array}{r} 78 \\ 1000 \overline{) 78000} \\ \underline{-7000} \\ 8000 \\ \underline{-8000} \\ 0 \end{array}$$

(c) $65000 \div 10 = 6500$ $65000 \div 100 = 650$ $65000 \div 1000 = 65$

$$\begin{array}{r} 6500 \\ 10 \overline{) 65000} \\ \underline{-60} \\ 50 \\ \underline{-50} \\ 0 \end{array}$$

$$\begin{array}{r} 650 \\ 100 \overline{) 65000} \\ \underline{-600} \\ 500 \\ \underline{-500} \\ 0 \end{array}$$

$$\begin{array}{r} 65 \\ 1000 \overline{) 65000} \\ \underline{-6000} \\ 5000 \\ \underline{-5000} \\ 0 \end{array}$$

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(d) $597000 \div 10 = 59700$ $597000 \div 100 = 5970$ $597000 \div 1000 = 597$

$$\begin{array}{r} 59700 \\ 10 \overline{)597000} \\ \underline{-50} \\ 97 \\ \underline{90} \\ 70 \\ \underline{-70} \\ 0 \end{array}$$

$$\begin{array}{r} 5970 \\ 100 \overline{)597000} \\ \underline{-500} \\ 970 \\ \underline{-900} \\ 700 \\ \underline{-700} \\ 0 \end{array}$$

$$\begin{array}{r} 597 \\ 1000 \overline{)597000} \\ \underline{-5000} \\ 9700 \\ \underline{-9000} \\ 7000 \\ \underline{-7000} \\ 0 \end{array}$$

(e) $210000 \div 10 = 21000$ $210000 \div 100 = 2100$ $210000 \div 1000 = 210$

$$\begin{array}{r} 21000 \\ 10 \overline{)210000} \\ \underline{-20} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

$$\begin{array}{r} 2100 \\ 100 \overline{)210000} \\ \underline{-200} \\ 100 \\ \underline{-100} \\ 0 \end{array}$$

$$\begin{array}{r} 210 \\ 1000 \overline{)210000} \\ \underline{-2000} \\ 1000 \\ \underline{-1000} \\ 0 \end{array}$$

(3) Solve the following.

(a) 624×23

$$\begin{array}{r} 624 \\ \times 23 \\ \hline 1872 \\ +12480 \\ \hline 14352 \end{array}$$

(b) 2456

$$\begin{array}{r} 2456 \\ \times 90 \\ \hline 0000 \\ +221040 \\ \hline 221040 \end{array}$$

(c)

$$\begin{array}{r} 1092 \\ \times 981 \\ \hline 1092 \\ 87360 \\ 982800 \\ \hline 1071252 \end{array}$$

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(d) 78543×49 $\begin{array}{r} 78543 \\ \times 49 \\ \hline 706887 \\ + 3141720 \\ \hline 3848607 \end{array}$	(e) 45201×561 $\begin{array}{r} 45201 \\ \times 561 \\ \hline 45201 \\ 2712060 \\ 22600500 \\ \hline 25357761 \end{array}$	(f) 111256×342 $\begin{array}{r} 111256 \\ \times 342 \\ \hline 222512 \\ 4450240 \\ 33376800 \\ \hline 38049552 \end{array}$
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(g) $790,902 \times 643$ $\begin{array}{r} 790902 \\ \times 643 \\ \hline 2372706 \\ + 31636080 \\ 474541200 \\ \hline 508549986 \end{array}$	(h) $356,219 \times 101$ $\begin{array}{r} 356219 \\ \times 101 \\ \hline 356219 \\ + 0000000 \\ 35621900 \\ \hline 35978119 \end{array}$
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(4) Solve the following numbers.

(a) $13440 \div 15$ $\begin{array}{r} 896 \\ 15 \overline{) 13440} \\ \underline{-120} \\ 144 \\ \underline{-135} \\ 90 \\ \underline{-90} \\ 0 \end{array}$ Ans: 896	(b) $86449 \div 29$ $\begin{array}{r} 2981 \\ 29 \overline{) 86449} \\ \underline{-58} \\ 284 \\ \underline{-261} \\ 234 \\ \underline{-232} \\ 29 \\ \underline{-29} \\ 0 \end{array}$ Ans: 2981	(c) $32536 \div 56$ $\begin{array}{r} 581 \\ 56 \overline{) 32536} \\ \underline{-280} \\ 453 \\ \underline{-448} \\ 56 \\ \underline{-56} \\ 0 \end{array}$ Ans: 581
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(d) $47088 \div 48$ $\begin{array}{r} 981 \\ 48 \overline{) 47088} \\ \underline{-432} \\ 388 \\ \underline{-384} \\ 48 \\ \underline{-48} \\ 0 \end{array}$ Ans: 981	(e) $56780 \div 20$ $\begin{array}{r} 2839 \\ 20 \overline{) 56780} \\ \underline{-40} \\ 167 \\ \underline{-160} \\ 78 \\ \underline{-60} \\ 180 \\ \underline{-180} \\ 0 \end{array}$ Ans: 2839	(f) $26166 \div 98$ $\begin{array}{r} 267 \\ 98 \overline{) 26166} \\ \underline{-196} \\ 656 \\ \underline{-588} \\ 686 \\ \underline{-686} \\ 0 \end{array}$ Ans: 267
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(g) $73810 \div 11$ $\begin{array}{r} 6710 \\ 11 \overline{) 73810} \\ \underline{-66} \\ 78 \\ \underline{-77} \\ 11 \\ \underline{-11} \\ 0 \end{array}$ Ans: 6710	(h) $64454 \div 32$ $\begin{array}{r} 2014 \\ 32 \overline{) 64454} \\ \underline{-64} \\ 45 \\ \underline{-32} \\ 134 \\ \underline{-128} \\ 6 \end{array}$ Ans = 2014 Remainder = 6
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5. Alia has Rs 22580. She wants to distribute them among 18 people. Find:

- How much money will each person get?
- How much money will be left?

Alia has money = 22580 Rs
 Distribute among = 18 persons

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$$\begin{array}{r}
 1254 \\
 18 \overline{) 22580} \\
 \underline{-18} \\
 45 \\
 \underline{-36} \\
 98 \\
 \underline{-90} \\
 80 \\
 \underline{72} \\
 8
 \end{array}$$

- a) Each person got = 1254 Rs
 (b) Money left = 8 Rs → Remainder

6. Omar's monthly income is Rs. 13,582. Find out his total income in 3 years.

$$\begin{aligned}
 \text{Omar's monthly income} &= 13582 \text{ Rs} \\
 \text{Omar's yearly income} &= 13582 \times 12 \\
 &= 162984 \\
 \text{Omar's 3 years income} &= 162984 \times 3 \\
 &= 488952
 \end{aligned}$$

OR

6. Omar's monthly income is Rs. 13582. Find out his total income in 134 months.

$$\begin{aligned}
 \text{Omar's monthly income} &= 13582 \text{ Rs} \\
 \text{Omar's yearly income} &= 13582 \times 134 \\
 &= 1819988
 \end{aligned}$$

7. A toy factory manufactures 28,550 toys in 25 days. How many toys will it manufacture in one day?

$$\begin{aligned}
 \text{Factory manufacture toys in 25 days} &= 28550 \\
 \text{Factory manufactures toys in 1 day} &= 28550 \div 25 \\
 &= 1142 \text{ toys}
 \end{aligned}$$

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$$\begin{array}{r}
 1142 \\
 2 \overline{) 28550} \\
 \underline{25} \\
 -35 \\
 \underline{25} = 1142 \text{ toys} \\
 105 \\
 \underline{-100} \\
 50 \\
 \underline{-50} \\
 0
 \end{array}$$

8. A poultry farm sells 576,012 eggs in a day. How many eggs will poultry farm sell in 56 days.

Eggs sold in 1 day	= 576,012	576012
Eggs sold in 56 days	= 576,012 × 56	×
	= 32,256,672	56
		<u>3456072</u>
		+ 28800600
		<u>32256672</u>

9. Hammad bought one laptop, for Rs 89,710. Find the price of 10 such laptops.

Price of one laptop = 89,710
 Price of 10 laptops = 89,710 × 10
 = 8,97,100 Ans

10. There are 145 boxes of pencils. Each containing 5 pencils. If 48 boxes have blue pencils and the rest have red pencils, find:

a) The total number of pencils.

b) Number of red pencils.

Total boxes of pencils = 145

Each box contains pencil = 5

Boxes contain blue pencil = 48 × 5 = 240 pencil

(a) Total number of pencils = 145 × 5 = 725 pencil	(b) Number of red pencil = 485 pencil
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$\begin{array}{r} 2 \quad 2 \\ 1 \quad 4 \quad 5 \\ \times \quad 5 \\ \hline 7 \quad 2 \quad 5 \end{array}$	$\begin{array}{r} 6 \quad 12 \\ 7 \quad 2 \quad 5 \\ 1 \quad 2 \quad 5 \\ -2 \quad 4 \quad 0 \\ \hline 4 \quad 8 \quad 5 \end{array}$
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Exercise No: 4

(1) Identify the rules of this pattern and also find the next three terms.

(a) 10, 40, 160, 640, 2560, 10240, 40960

Rule = Multiplication by 4 =

{ $640 \times 4 = 2560$ } { $2560 \times 4 = 10240$ } { $10240 \times 4 = 40960$ }

(b) 22, 220, 2200, 22000, 220000, 2200000

Rule: Multiplication by 10 =

{ $2200 \times 10 = 22000$ } { $22000 \times 10 = 220000$ }

{ $220000 \times 10 = 2200000$ }

(c) 352, 176, 88, 44, 22, 11

Rule: Division by 2 =

{ $88 \div 2 = 44$ } { $44 \div 2 = 22$ } { $22 \div 2 = 11$ }

(d) 780, 880, 980, 1080, 1180, 1280

Rule: Adding 100

{ $980 + 100 = 1080$ } { $1080 + 100 = 1180$ } { $1180 + 100 = 1280$ }

(e) 560, 540, 520, 500, 480, 460, 440

Rule: subtracting 20

{ $500 - 20 = 480$ } { $480 - 20 = 460$ } { $460 - 20 = 440$ }

(2) Observe the given hundred charts, find at least five patterns of various arithmetic operations. Also find the rules of these patterns.

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Pattern rule No: 1

13 , 14 , 25, 36, 47, 58 , 69, 80

Each next number is obtained by adding 11 to the previous number. Thus, the rule of pattern is addition.

Pattern rule No: 2

10 , 19 , 28 , 37 , 46 , 55 , 64, 73, 82, 91

Each next number is obtained by adding 9 to the previous number. Thus, the rule of pattern is addition.

Pattern rule No: 3

100 , 89 , 78 , 67 , 56 , 45 , 34 , 23 , 12 , 1

Each next number is obtained by subtraction 11 to the previous number. Thus, the rule of pattern is subtraction.

Pattern rule No: 4

100 , 90 , 80, 70, 60, 50 , 40 , 30 , 20 , 10

Each next number is obtained by subtraction 10 to the previous number. Thus, the rule of pattern is subtraction.

Pattern rule No: 5

1 , 11 , 21 , 31, 41, 51 , 61, 71, 81, 91

Each next number is obtained by adding 10 to the previous number. Thus, the rule of pattern is addition.

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(3) Observe the given tablets and find the rules of number the pattern.

(a)

position	Term	
1	4	4
2	5	$5 = 4 + 1$
3	6	$6 = 5 + 1$
4	7	$7 = 6 + 1$
5	8	$8 = 7 + 1$

Rule of pattern is adding 1 to previous term:

(b)

Position	Term	
1	12	12
2	22	$12 + 10 = 22$
3	32	$22 + 10 = 32$
4	42	$32 + 10 = 42$
5	52	$42 + 10 = 52$

Rule of pattern is adding 10 to previous term

(a)

Position	Term
1	$4 \times 3 = 12$
2	$5 \times 3 = 15$
3	$6 \times 3 = 18$
4	$7 \times 3 = 21$
5	$8 \times 3 = 24$

Rule of multiplying 3 to the previous term

(b)

Position	Term
1	$12 - 5 = 7$
2	$22 - 5 = 17$
3	$32 - 5 = 27$
4	$42 - 5 = 37$
5	$52 - 5 = 47$

Rule of subtracting 5 from previous term

(c)

Position	Term
1	$11 + 9 = 20$
2	$22 + 9 = 31$
3	$33 + 9 = 42$
4	$44 + 9 = 53$
5	$55 + 9 = 64$

Rule of adding 9 to the previous term

(d)

Position	Term
1	$100 \div 2 = 50$
2	$200 \div 2 = 100$
3	$300 \div 2 = 150$
4	$400 \div 2 = 200$
5	$500 \div 2 = 250$

Rule of division by 2 previous term

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Review Exercise

(Q1). Encircle the correct option.

- (a) We put commas after every 3 digit in 3.
 (i) 2 **(ii) 3** (iii) 4 (iv) 16
- (b) The value of 2 in the number 6985621 is 20.
 (i) 2 **(ii) 20** (iii) 200 (iv) 2000
- (c) In 7,856,211 the digit of 6 is the thousand place digit.
 (i) 2 (ii) 5 **(iii) 6** (iv) 8
- (d) When we multiply a number by 1000 we put 3 zero to its right
 (i) 10 (ii) 100 **(iii) 1000** (iv) 1
- (e) When we divide a number by 10 we remove 10 from its right
 (i) add (ii) subtract (iii) multiply **(iv) divide**

(Q2) Write the following number in words.

(a) 8,734,123

Word form: Eight million, seven hundred and thirty four thousands, one hundred and twenty three.

(b) 6,965,129

Word form: six million, nine hundred, and sixty five thousands, one hundred and twenty nine.

(c) 4,982,009

Word form: four million, nine hundred and eighty two thousands and nine.

(d) 9,012,011

Word form: Nine million, twelve thousands and eleven.

(Q3) Solve the following.

(a) $212121 + 56234$

$$\begin{array}{r} 212121 \\ + 56234 \\ \hline 268355 \end{array}$$

(b) $18315 + 102376$

$$\begin{array}{r} 18315 \\ + 102376 \\ \hline 120691 \end{array}$$

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(c) $727191 + 92921$ $\begin{array}{r} \overset{1}{7} \overset{1}{2} \overset{1}{7} \overset{1}{1} 91 \\ + 92921 \\ \hline 820112 \end{array}$	(d) $139657 + 247777$ $\begin{array}{r} \overset{1}{1} \overset{1}{3} \overset{1}{9} \overset{1}{6} 57 \\ + 247777 \\ \hline 387434 \end{array}$
(e) $532481 + 100008$ $\begin{array}{r} 532481 \\ + 100008 \\ \hline 632489 \end{array}$	(f) $200454 + 126654$ $\begin{array}{r} \overset{1}{2} \overset{1}{0} \overset{1}{0} 454 \\ + 126654 \\ \hline 327108 \end{array}$
(Q4) Solve the following.	
(a) $678921 - 31412$ $\begin{array}{r} \overset{1}{6} \overset{11}{7} 5921 \\ - 31412 \\ \hline 644509 \end{array}$	(b) $986543 - 65219$ $\begin{array}{r} \overset{1}{9} \overset{11}{8} \overset{13}{6} 543 \\ - 65219 \\ \hline 921324 \end{array}$
(c) $108761 - 70021$ $\begin{array}{r} \overset{10}{1} 08761 \\ - 70021 \\ \hline 38740 \end{array}$	(d) $846109 - 591089$ $\begin{array}{r} \overset{7}{8} \overset{14}{4} \overset{6}{6} \overset{10}{1} 09 \\ - 591089 \\ \hline 255020 \end{array}$
(e) $865439 - 761212$ $\begin{array}{r} 865439 \\ - 761212 \\ \hline 104227 \end{array}$	(f) $696349 - 288888$ $\begin{array}{r} \overset{8}{6} \overset{15}{9} \overset{17}{6} \overset{14}{3} 49 \\ - 288888 \\ \hline 407461 \end{array}$

(Q5) Solve the following.

(a) 12356×122 $\begin{array}{r} \overset{1}{1} \overset{1}{2} 356 \\ \times 122 \\ \hline \overset{1}{2} 4712 \\ + 247120 \\ + 1235600 \\ \hline 1507432 \end{array}$	(b) 65781×100 $\begin{array}{r} 65781 \\ \times 100 \\ \hline 00000 \\ + 000000 \\ + 6578100 \\ \hline 6578100 \end{array}$
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(c) 262825×522

$$\begin{array}{r} \begin{array}{ccccccc} & 1 & 1 & 1 & 1 & 1 & \\ & 2 & 6 & 2 & 8 & 2 & 5 \\ \times & & & & 5 & 2 & 2 \\ \hline & & & & 5 & 2 & 5 & 6 & 5 & 0 \\ + & 5 & 2 & 5 & 6 & 5 & 0 & 0 \\ \hline 1 & 3 & 1 & 4 & 1 & 2 & 5 & 0 & 0 \\ \hline 1 & 3 & 7 & 1 & 9 & 4 & 6 & 5 & 0 \end{array} \end{array}$$

(d) 837564×519

$$\begin{array}{r} \begin{array}{ccccccc} & 2 & 1 & 1 & 1 & & \\ & 8 & 3 & 7 & 5 & 6 & 4 \\ \times & & & & 5 & 1 & 9 \\ \hline & & & & 7 & 5 & 3 & 8 & 0 & 7 & 6 \\ + & 8 & 3 & 7 & 5 & 6 & 4 & 0 \\ \hline 4 & 1 & 8 & 7 & 8 & 2 & 0 & 0 & 0 \\ \hline 4 & 3 & 4 & 6 & 9 & 5 & 7 & 1 & 6 \end{array} \end{array}$$

6: Solve the following:

(a) $66693 - 33 = 2021$

$$\begin{array}{r} 2021 \\ \sqrt{66693} \\ -66 \\ \hline 69 \\ -66 \\ \hline 33 \\ -33 \\ \hline 0 \end{array}$$

Answer: 2021

(b) $35788 \div 42$

$$\begin{array}{r} 852 \\ \sqrt{35788} \\ -336 \\ \hline 218 \\ -210 \\ \hline 88 \\ -84 \\ \hline 4 \end{array}$$

Answer: 852, Remainder = 4

(c) $25111 - 69$

$$\begin{array}{r} 363 \\ \sqrt{25111} \\ -207 \\ \hline 441 \\ -414 \\ \hline 271 \\ -207 \\ \hline 64 \end{array}$$

Ans: 363, Remainder = 64

(d) $28000 \div 1000$

$$\begin{array}{r} 28 \\ \sqrt{28000} \\ -2000 \\ \hline 8000 \\ -8000 \\ \hline 0 \end{array}$$

Answer: 28

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(e) $58580 \div 10$ $\begin{array}{r} 5858 \\ 10 \overline{) 58580} \\ \underline{-50} \\ 85 \\ \underline{-80} \\ 58 \\ \underline{-50} \\ 80 \\ \underline{-80} \\ 0 \end{array}$ Answer: 5858	(f) $28104 \div 28$ $\begin{array}{r} 1003 \\ 28 \overline{) 28104} \\ \underline{-28} \\ 104 \\ \underline{-84} \\ 20 \end{array}$ Ans: 1003 , Remainder = 20
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(Q7) What are the rules for these patterns? Also find the next three terms of each pattern.

(a) 50, 100, 150, 200, 250, 300, 350

Rule: Adding 50 in the previous term.

{ $200 + 50 = 250$ } { $250 + 50 = 300$ } { $300 + 50 = 350$ }

(b) 180, 165, 150, 135, 120, 105, 90

180, 165, 150, 135, .

Rule: subtracting 15 from the previous term.

{ $135 - 15 = 120$ } { $120 - 15 = 105$ } { $105 - 15 = 90$ }

(c) 18, 90, 450, 2250, 1150, 56250, 281250

Rule: Multiplication by 5 the previous term.

{ $2250 \times 5 = 1150$ } { $1150 \times 5 = 56250$ } { $56250 \times 5 = 281250$ }

(d) 6, 100, 000, 610,000, 61000, 6100, 610, 61

Rule: Division by 10 the previous term.

{ $61000 \div 10 = 6100$ } { $6100 \div 10 = 610$ } { $610 \div 10 = 61$ }

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(Q8) Fill in the blanks and complete the pattern.

(a)	(b)
$10 \times \underline{1} = 10$	$\underline{10,000} \div 10 = 1000$
$10 \times \underline{10} = 100$	$\underline{10,000} \div 100 = 100$
$10 \times \underline{100} = 1000$	$\underline{10,000} \div 1000 = 10$
$10 \times \underline{1000} = 10000$	$\underline{10,000} \div 10,000 = 1$

9. The price of a car is Rs 456,721 and the price of another car is Rs 987,676. Find the total price of both.

Price of a shop= 4 5 6 7 2 1 Rs
Price of a flat= 9 8 7 6 7 6 Rs
Total Price= 1, 4 4 4, 3 9 7

$$\begin{array}{r} 456721 \\ + 987676 \\ \hline 1444397 \end{array}$$

10. There are 768,121 children and 456,789 women in the city. How many more children are there than the women?

Children in a city=7 6 8, 1 2 1
Woman in a city=45 6, 7 8 9
Children more=3 1 1, 3 3 2

$$\begin{array}{r} 7 6 8 1 2 1 \\ - 4 5 6 7 8 9 \\ \hline 3 1 1,3 3 2 \end{array}$$

11. The price of a scanner is Rs 162,900 and the price of a laser printer is Rs 96880. Find:

a) the total price of both items

b) the total price of 15 scanners and 3 laser printers.

Price of a scanner = 16 2900 Rs

Price of a laser printer = 9 688 0 Rs

(a) Total price of both = 259,780 Rs

Printer of 15 scanners = 16 2900 x 15 = 2,443,500 Rs.

Price of 3 laser printers = 96880 x 3 = 290,640 Rs.

$$\begin{array}{r} 162900 \\ \times 15 \\ \hline 814500 \\ 1629000 \\ \hline 2443500 \end{array}$$

$$\begin{array}{r} 162900 \\ + 96880 \\ \hline 259780 \end{array}$$

$$\begin{array}{r} \overset{2}{9} \overset{2}{6} \overset{2}{8} 8 0 \\ \times \qquad \qquad \qquad 3 \\ \hline 290640 \text{ Rs} \end{array}$$

(b) Total price of 15 scanner and 3 laser printer = 2,734,170 R

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$$\begin{array}{r} 2443500 \\ 290640 \\ \hline 2734140 \end{array}$$

12. 35288 blocks are to be packed in 28 boxes. Find:

a) how many blocks are there in each box?

b) how many blocks will be left .

Total blocks = 35288

Total boxes = 28

(a) Each box contains blocks =

$$35288 \div 28 = 1260$$

$$\begin{array}{r} 1260 \\ 28 \overline{) 35288} \\ \underline{-28} \\ 72 \\ \underline{-56} \\ 168 \\ \underline{-168} \\ 08 \end{array}$$

(b) 555 boxes contains = 555

$$\times 1260 = 699,300$$

$$\begin{array}{r} 1260 \\ \times 555 \\ \hline + 6300 \\ + 63000 \\ + 630000 \\ \hline 699300 \end{array}$$

Q13. Observe the given tables and find the rules of number the patterns.

(a)

Position	Term
1	$2 \times 20 = 40$
2	$4 \times 20 = 80$
3	$6 \times 20 = 120$
4	$8 \times 20 = 160$

Rule: Multiplication by 20

(b)

Position	Term
1	$10 \div 5 = 2$
2	$25 \div 5 = 5$
3	$40 \div 5 = 8$
4	$50 \div 5 = 10$

Division by 5

