

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

Perimeter of square = side $\times$ 4 $1\frac{7}{8} \times 4 \Rightarrow \frac{15}{8} \times 4 =$

$\frac{15}{2} = 7\frac{1}{2}$ Meter Ans.

Verification:

$1\frac{7}{8} + 1\frac{7}{8} + 1\frac{7}{8} + 1\frac{7}{8} = \frac{15}{8} + \frac{15}{8} + \frac{15}{8} + \frac{15}{8} \Rightarrow \frac{60}{8} = \frac{15}{2} = 7\frac{1}{2}$

10. The area of a room is $209\frac{1}{18} \text{ m}^2$.

If the length of the room is $17\frac{2}{3} \text{ m}$,
 find the width of the room.

S R

Area = $209\frac{1}{18} \text{ m}^2$

P Q

Area of a room = $209\frac{1}{18} \text{ m}^2$

Hint: The area of the room is calculated by multiplying its length and width.

Area of a room = $209\frac{1}{18} \text{ m}^2$

Length of room = $17\frac{2}{3} \text{ m}$

Width of a room =

Width = $\frac{A}{L} = \frac{209\frac{1}{18}}{17\frac{2}{3}} = \frac{3763}{18} \div \frac{53}{3}$

$= \frac{3763}{18} \times \frac{3}{53} \Rightarrow \frac{71}{6} = 11\frac{5}{6} \text{ m Ans}$

Unit No: 4	Decimals and percentage Exercise 1
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(1) Compare the following decimals using the (<, > or =)

(a) $0.4 < 0.5$	(b) $1.3 < 1.6$	(c) $34.56 < 35.66$
(d) $6.67 \leq 6.69$	(e) $0.45 = 0.45$	(f) $23.12 \leq 51.31$
(g) $71.2 \geq 71.02$	(h) $6.06 < 6.1$	(i) $4.8 = 4.80$

(2) Write the following decimals in descending order.

(a) 2.51, 3.31, 2.47, 3.81, 3.01	(b) 4.32, 4.68, 0.31, 4.23, 4.31
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Sol: 3.81, 3.31, 3.01, 2.51, 2.47	Sol: 4.68, 4.32, 4.31, 4.23, 0.31
(c) 6.21, 6.77, 6.31, 6.33, 6.60	(d) 1.62, 1.03, 1.60, 1.66, 1.61
Sol: 6.77, 6.60, 6.33, 6.31, 6.21	Sol: 1.66, 1.62, 1.61, 1.60, 1.03
(3) Write the following decimals in ascending order.	
(a) 7.2, 12.4, 10.8, 9.4, 18.2	(b) 8.56, 8.06, 8.5, 8.52, 8.51, 8.05
Sol: 7.2, 9.4, 10.8, 12.4, 18.2	Sol: 8.05, 8.06, 8.5, 8.51, 8.52, 8.56
(c) 3.4, 3.54, 3.55, 3.45, 3.14, 3.04	(d) 9.5, 9.05, 9.52, 9.55, 9.09, 9.45
Sol: 3.04, 3.14, 3.4, 3.45, 3.54, 3.55	Sol: 9.05, 9.09, 9.45, 9.5, 9.52, 9.55

Exercise No: 2

$\begin{array}{r} 4.131 + 8.3 \\ 4.131 \\ + 8.300 \\ \hline 12.431 \end{array}$	$\begin{array}{r} 3.211 + 1.860 \\ 3.211 \\ + 1.860 \\ \hline 5.071 \end{array}$
$\begin{array}{r} 3.211 + 89.02 \\ 3.211 \\ + 89.020 \\ \hline 92.231 \end{array}$	$\begin{array}{r} 2.001 + 75.46 \\ 2.001 \\ + 75.460 \\ \hline 77.461 \end{array}$
$\begin{array}{r} 47.04 + 5.007 \\ 47.040 \\ + 5.007 \\ \hline 52.047 \end{array}$	$\begin{array}{r} 2.341 + 5.914 \\ 2.341 \\ + 5.914 \\ \hline 8.255 \end{array}$
$\begin{array}{r} 1.781 + 9.111 \\ 1.781 \\ + 9.111 \\ \hline 10.892 \end{array}$	$\begin{array}{r} 1.194 + 3.876 \\ 1.194 \\ + 3.876 \\ \hline 5.070 \end{array}$
$\begin{array}{r} 3.562 + 1.210 \\ 3.562 \\ + 1.210 \\ \hline 4.772 \end{array}$	$\begin{array}{r} 1.831 + 21.24 \\ 1.831 \\ + 21.24 \\ \hline 23.071 \end{array}$

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$\begin{array}{r} 5.008 + 30.44 \\ 05.008 \\ + 30.440 \\ \hline 35.448 \end{array}$	$\begin{array}{r} 69.25 + 3.100 \\ 69.250 \\ + 03.100 \\ \hline 72.350 \end{array}$
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(2) Solve the following.

$\begin{array}{r} 9.410 - 2.392 \\ 9.410 \\ - 2.392 \\ \hline 7.018 \end{array}$	$\begin{array}{r} 11.45 - 2.86 \\ 11.45 \\ - 2.86 \\ \hline 8.59 \end{array}$
$\begin{array}{r} 3.238 - 2.376 \\ 3.238 \\ - 2.376 \\ \hline 0.862 \end{array}$	$\begin{array}{r} 6.188 - 2.109 \\ 6.188 \\ - 2.109 \\ \hline 4.079 \end{array}$
$\begin{array}{r} 3.80 - 3.09 \\ 3.80 \\ - 3.09 \\ \hline 0.71 \end{array}$	$\begin{array}{r} 5.341 - 2.864 \\ 5.341 \\ - 2.864 \\ \hline 2.477 \end{array}$
$\begin{array}{r} 6.554 - 1.309 \\ 6.554 \\ - 1.309 \\ \hline 5.245 \end{array}$	$\begin{array}{r} 5.555 - 4.201 \\ 5.555 \\ - 4.201 \\ \hline 1.354 \end{array}$

$\begin{array}{r} 1.999 - 1.088 \\ 1.999 \\ - 1.088 \\ \hline 0.911 \end{array}$	$\begin{array}{r} 2.018 - 1.740 \\ 2.018 \\ - 1.740 \\ \hline 0.278 \end{array}$
$\begin{array}{r} 4.99 - 3.400 \\ 4.990 \\ - 3.400 \\ \hline 1.590 \end{array}$	$\begin{array}{r} 12.34 - 11.90 \\ 12.34 \\ - 11.90 \\ \hline 0.44 \end{array}$

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3. Rohan spent Rs. 65.33 on Monday and Rs 97.29 on Tuesday. What amount did he spend in two days? Rohan spent on Monday = 65.33 Rs Rohan spent on Tuesday = 97.29 Rs Total spent = 162.62 Rs $\begin{array}{r} 65.33 \\ + 97.29 \\ \hline 162.62 \end{array}$	4. Muaaz covered a distance of 76.36 km in car and 55.45 km in train to meet her grandmother. How much more distance did he cover in train? Muazz travel in a car = 76.36 Muazz travel in a train = 55.45 More distance covered by car = 20.91 Km $\begin{array}{r} 76.36 \\ - 55.45 \\ \hline 20.91 \end{array} \text{ Ans.}$
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(5) Saad run 5.13 Kilometers on first day and 2.33 km on the second day. Find the total distance he covered in both days.

Saad covered distance at first day = 5.13km
 Saad covered distance at second day = 2.33 km
 Total distance covered in both days = 7.46 km

$$\begin{array}{r} 5.13 \\ + 2.33 \\ \hline 7.46 \end{array}$$

(6) A tailor had 15.25 meter cloth. He used 11.55 meter cloth in stitching two dresses. How much cloth is left with him.

Tailor had a cloth = 15.25 meter
 Cloth used in two dresses = 11.55 meter

Cloth left = 3.7 meter Ans

$$\begin{array}{r} 15.25 \\ - 11.55 \\ \hline 3.70 \end{array}$$

(7) Nida needs 50.55 gram sugar for a cake and 28.5 gram sugar for a few cupcakes. Find

(a) How much sugar does she need altogether?

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(b) Which item requires more sugar and how much more?

Nida needs sugar for a cake = 50.55 gram

Nida needs sugar for cupcakes = 28.5 gram

Sugar need altogether = 79.05 grams. Ans

$$\begin{array}{r} 50.55 \\ + 28.5 \\ \hline 79.05 \end{array}$$

(b) Item requires much sugar = 22.02 = 5 gram

$$\begin{array}{r} 50.55 \\ - 28.50 \\ \hline 22.05 \end{array}$$

So, Cake requires 22.05 gram more sugar.

Exercise No: 3

1. Solve the following.

(a) 1.59×10

$$\begin{array}{r} 1.59 \\ \times 10 \\ \hline 000 \\ 1590 \\ \hline 15.90 \end{array}$$

(b) 2.48×100

$$\begin{array}{r} 2.48 \\ \times 100 \\ \hline 000 \\ 0000 \\ 24800 \\ \hline 248.00 \end{array}$$

(c) 437×1000

$$\begin{array}{r} 437 \\ \times 1000 \\ \hline 000 \\ 0000 \\ 00000 \\ 437000 \\ \hline 437000 \\ \text{Ans} = 4370 \end{array}$$

(d) 5.43×100

$$\begin{array}{r} 5.43 \\ \times 100 \\ \hline 000 \\ 0000 \\ 54300 \\ \hline 543.00 \\ \text{Ans} = 543 \end{array}$$

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(e) 3.03×100 $\begin{array}{r} 3.03 \\ \times 100 \\ \hline 000 \\ 0000 \\ 30300 \\ \hline 303.00 \\ \text{Ans} = 303 \end{array}$	(f) 3.06×1000 $\begin{array}{r} 3.06 \\ \times 1000 \\ \hline 000 \\ 0000 \\ 00000 \\ 306000 \\ \hline 3060.00 \\ \text{Ans} = 3060 \end{array}$
(g) 3.54×100 $\begin{array}{r} 3.54 \\ \times 100 \\ \hline 000 \\ 0000 \\ 35400 \\ \hline 354.00 \\ \text{Ans} = 354 \end{array}$	(h) 8.73×10 $\begin{array}{r} 8.73 \\ \times 10 \\ \hline 000 \\ 8730 \\ \hline 87.30 \\ \text{Ans} = 87.3 \end{array}$
(i) 3.103×100 $\begin{array}{r} 3.103 \\ \times 100 \\ \hline 0000 \\ 00000 \\ 310300 \\ \hline 310.300 \\ \text{Ans} = 310.3 \end{array}$	(j) 4.72×10 $\begin{array}{r} 4.72 \\ \times 10 \\ \hline 000 \\ 4720 \\ \hline 47.20 \\ \text{Ans} = 47.2 \end{array}$
(k) 3.42×1000 $\begin{array}{r} 3.42 \\ \times 1000 \\ \hline 000 \\ 0000 \\ 00000 \\ 342000 \\ \hline 3420.00 \\ \text{Ans} = 3420 \end{array}$	(l) 2.44×100 $\begin{array}{r} 2.44 \\ \times 100 \\ \hline 000 \\ 0000 \\ 24400 \\ \hline 244.00 \\ \text{Ans} = 244 \end{array}$

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(2) Solve the following.	
(a) 5.36×82 $\begin{array}{r} \overset{2}{5}.\overset{1}{3}6 \\ \times \quad 82 \\ \hline 1072 \\ +42880 \\ \hline 439.52 \end{array}$	(b) 1.71×12 $\begin{array}{r} \overset{1}{1}.\overset{1}{7}1 \\ \times \quad 12 \\ \hline 342 \\ +1710 \\ \hline 20.52 \end{array}$
(c) 4.91×34 $\begin{array}{r} \overset{2}{4}.\overset{1}{9}1 \\ \times \quad 34 \\ \hline 1964 \\ +14730 \\ \hline 166.94 \end{array}$	(d) 5.49×18 $\begin{array}{r} \overset{4}{5}.\overset{3}{4}9 \\ \times \quad 18 \\ \hline 2832 \\ +3540 \\ \hline 63.72 \end{array}$
(e) 1.23×2 $\begin{array}{r} 1.23 \\ \times \quad 2 \\ \hline 2.46 \end{array}$ Ans= 2.46	(f) 5.49×23 $\begin{array}{r} \overset{1}{5}.\overset{1}{4}9 \\ \times \quad 23 \\ \hline 1647 \\ +10980 \\ \hline 126.27 \end{array}$ Ans= 126.27
(g) 2.51×89 $\begin{array}{r} \overset{4}{2}.\overset{1}{5}1 \\ \times \quad 89 \\ \hline 2259 \\ +20080 \\ \hline 223.39 \end{array}$ Ans= 223.39	(h) 3.05×80 $\begin{array}{r} \overset{4}{3}.\overset{0}{0}5 \\ \times \quad 80 \\ \hline 000 \\ +24400 \\ \hline 244.00 \end{array}$ Ans= 244

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(i) 1.46×61 $\begin{array}{r} \overset{2}{1}.\overset{4}{4}6 \\ \times 61 \\ \hline 146 \\ + 8760 \\ \hline 89.06 \end{array}$ Ans= 89.06	(j) 9.17×11 $\begin{array}{r} 9.17 \\ \times 11 \\ \hline 917 \\ + 9170 \\ \hline 100.87 \end{array}$ Ans = 100.87
(k) 2.50×43 $\begin{array}{r} \overset{2}{2}.\overset{1}{5}0 \\ \times 43 \\ \hline 750 \\ + 10000 \\ \hline 107.50 \end{array}$ Ans= 107.5	(l) 4.13×86 $\begin{array}{r} \overset{1}{4}.\overset{2}{1}3 \\ \times 86 \\ \hline 2478 \\ + 33040 \\ \hline 355.18 \end{array}$ Ans= 355.18
(3) Solve the following.	
(a) 5.36×2.5 $\begin{array}{r} \overset{1}{5}.\overset{3}{3}6 \\ \times 2.5 \\ \hline 2680 \\ + 10720 \\ \hline 13.400 \end{array}$ Ans= 13.4	(b) 2.82×2.3 $\begin{array}{r} \overset{1}{2}.\overset{2}{8}2 \\ \times 2.3 \\ \hline 846 \\ + 5640 \\ \hline 6.486 \end{array}$ Ans= 6.486
(c) 5.82×5.34 $\begin{array}{r} \overset{4}{5}.\overset{2}{8}2 \\ \times \overset{3}{5}.\overset{1}{3}4 \\ \hline 2328 \\ 17460 \\ 291000 \\ \hline 31.0788 \end{array}$ Ans= 31.0788	(d) 4.65×39.7 $\begin{array}{r} \overset{1}{4}.\overset{4}{6}5 \\ \times \overset{1}{3}9.7 \\ \hline 3255 \\ + 41850 \\ + 139500 \\ \hline 184.605 \end{array}$ Ans= 184.605

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(e) 2.66×5.02 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \quad \text{\tiny 1} \\ 2.66 \\ \times 5.02 \\ \hline \end{array} \\ \begin{array}{r} 532 \\ + 0000 \\ + 133000 \\ \hline 133532 \end{array} \\ \text{Ans} = 13.3532 \end{array} $	(f) 6.38×2.12 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \\ 6.38 \\ \times 2.12 \\ \hline \end{array} \\ \begin{array}{r} 1276 \\ + 6380 \\ + 127600 \\ \hline 135256 \end{array} \\ \text{Ans} = 13.5256 \end{array} $
(g) 1.42×8.89 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \quad \text{\tiny 1} \\ 1.42 \\ \times 8.89 \\ \hline \end{array} \\ \begin{array}{r} 1278 \\ + 11360 \\ + 113600 \\ \hline 126238 \end{array} \\ \text{Ans} = 12.6238 \end{array} $	(h) 4.16×1.87 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \\ 4.16 \\ \times 1.87 \\ \hline \end{array} \\ \begin{array}{r} 2912 \\ + 33280 \\ + 41600 \\ \hline 77792 \end{array} \\ \text{Ans} = 7.7792 \end{array} $
(i) 2.57×2.54 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \quad \text{\tiny 1} \\ 2.57 \\ \times 2.54 \\ \hline \end{array} \\ \begin{array}{r} 1028 \\ + 12850 \\ + 51400 \\ \hline 65278 \end{array} \end{array} $	(j) 9.28×2.22 $ \begin{array}{r} \begin{array}{c} \text{\tiny 1} \\ 9.28 \\ \times 2.22 \\ \hline \end{array} \\ \begin{array}{r} 1856 \\ + 18560 \\ + 185600 \\ \hline 206016 \end{array} \\ \text{Ans} = 20.6016 \end{array} $

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(k) 3.19×6.98 $ \begin{array}{r} \begin{array}{r} \overset{1}{3}.\overset{5}{1}9 \\ \times \begin{array}{r} \overset{8}{6}.\overset{7}{9}8 \end{array} \\ \hline \begin{array}{r} \overset{1}{2}2\overset{1}{2}\overset{1}{2}6\overset{1}{6}2 \\ + \begin{array}{r} \overset{1}{2}8\overset{1}{7}10 \\ +191400 \end{array} \\ \hline 222662 \end{array} \end{array} $ Ans= 22.662	(l) 5.24×7.23 $ \begin{array}{r} \begin{array}{r} \overset{1}{5}.\overset{2}{2}4 \\ \times \begin{array}{r} \overset{3}{7}.\overset{2}{2}3 \end{array} \\ \hline \begin{array}{r} \overset{1}{1}5\overset{1}{7}2 \\ + \begin{array}{r} \overset{1}{1}0480 \\ +366800 \end{array} \\ \hline 378852 \end{array} \end{array} $ Ans= 37.8852
(4) A train travels 96.5 kilometers in an hour, how far will the train travel in 25 hours. Train travel in an hour = 96.5 Train travel in 25 hours = 96.5×25 $ \begin{array}{r} \begin{array}{r} \overset{3}{9}6.\overset{2}{5} \\ \times \begin{array}{r} \overset{1}{2}5 \end{array} \\ \hline \begin{array}{r} \overset{1}{4}8\overset{1}{2}5 \\ + \begin{array}{r} \overset{1}{1}9300 \end{array} \\ \hline 24125 \end{array} \end{array} $	(5) 25.5 meters of fabric is required to make a sofa cover. How many meters of fabric is needed to make. (a) 10 covers (b) 100 covers (c) 1000 covers (a) 100 sofa cover needed = 10 sofa cover needs = $ \begin{array}{r} \begin{array}{r} 25.5 \\ \times 10 \end{array} \\ \hline \begin{array}{r} 000 \\ + \begin{array}{r} 2550 \end{array} \\ \hline 255.0 \end{array} $
(Q5) (b) 100 sofa cover needs = $100 \times 25.5 = 2550 \text{ m}$ $ \begin{array}{r} \begin{array}{r} 25.5 \\ \times 100 \end{array} \\ \hline \begin{array}{r} 000 \\ + \begin{array}{r} 0000 \\ 25500 \end{array} \\ \hline 2550.0 \end{array} $	(Q5) (c) 1000 sofa covers needs = $ \begin{array}{r} \begin{array}{r} 25.5 \\ \times 1000 \end{array} \\ \hline \begin{array}{r} 000 \\ + \begin{array}{r} 0000 \\ 00000 \\ 255000 \end{array} \\ \hline 25500.0 \end{array} $
(6) A cement block weighs 4.23 kg. What will be the weight of	(7) The price of a liter of petrol is Rs. 103.8. what will be the

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12 such blocks. One block weight = 4.23 kg 12 blocks weight = 12×4.23 $= 50.76$ kg $\begin{array}{r} 4.23 \\ \times 12 \\ \hline 846 \\ + 4230 \\ \hline 5076 \end{array}$	price of 35 liters of petrol? Sol: Price of one liter petrol = 103.8 Price of 35 liters of petrol = $103.8 \times 35 = 3633$ Rs $\begin{array}{r} 103.8 \\ \times 35 \\ \hline 5190 \\ + 31140 \\ \hline 36330 \end{array}$
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Exercise No: 4

1. Solve the following.

(a) $41.8 \div 10$ $\frac{418}{10} \div 10$ $\frac{418}{10} \times \frac{1}{10} = \frac{209}{50}$ $\begin{array}{r} 4.18 \\ 50 \overline{) 209.00} \\ \underline{200} \\ 90 \\ \underline{50} \\ 400 \\ \underline{400} \\ 0 \end{array}$ Ans = 4.18	(b) $4.59 \div 100$ $\frac{459}{100} \div 100$ $\frac{459}{100} \times \frac{1}{100} = \frac{459}{10000}$ Ans = 0.0459
(c) $5.48 \div 1000$ $= \frac{548}{100} \div 1000$	(d) $6.430 \div 100$ $\frac{6430}{1000} \div 100$ $\frac{6430}{1000} \times \frac{1}{100}$

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$= \frac{548}{100} \times \frac{1}{1000} = \frac{548}{100000} = 0.00548$ $\frac{137}{100} \times \frac{1}{250}$ $= \frac{137}{25000} = 0.00548$	$\frac{643}{10000} = 0.0643$
(e) $4.14 \div 10$ $\frac{414}{100} \div 10$ $\Rightarrow \frac{414}{100} \times \frac{1}{10} = \frac{414}{1000} = 0.414$	$\begin{array}{r} 0.414 \\ 500 \overline{) 207.00} \\ \underline{-2000} \\ 700 \\ \underline{-500} \\ 2000 \\ \underline{-2000} \\ 0 \end{array}$
(f) $6.17 \div 1000$ $\frac{617}{100} \div 1000 \Rightarrow \frac{617}{100} \times \frac{1}{1000} = \frac{617}{100000} = 0.00617$	(g) $2.43 \div 100$ $\frac{243}{100} \div 100 \Rightarrow \frac{243}{100} \times \frac{1}{100} = \frac{243}{10000} = 0.0243$
h) $71.4 \div 10$ $\frac{714}{10} \div 10$ $\Rightarrow \frac{714}{10} \times \frac{1}{10} = \frac{714}{100} = 7.14$	(i) $4.24 \div 100$ $\frac{424}{100} \div 100 \Rightarrow \frac{424}{100} \times \frac{1}{100} = \frac{424}{10000} = 0.0424$

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(2) Solve the following.

(a) $3.40 \div 2$

$$\frac{340}{100} \div 2 \Rightarrow \frac{\cancel{340}^{34}}{\cancel{100}_{10}} \times \frac{1}{2} \\ \Rightarrow \frac{\cancel{34}^{17}}{\cancel{10}_5} \times \frac{1}{2} \Rightarrow \frac{17}{10} \Rightarrow 1.7$$

(b) $5.73 \div 3$

$$\frac{573}{100} \div 3 \Rightarrow \frac{\cancel{573}^{191}}{100} \times \frac{1}{\cancel{3}_1} \Rightarrow \frac{191}{100} = 1.91$$

(c) $5.05 \div 5$

$$\frac{505}{100} \div 5 \Rightarrow \frac{\cancel{505}^{101}}{100} \times \frac{1}{\cancel{5}_1} \Rightarrow \frac{101}{100} = 1.01$$

(d) $2.2 \div 55$

$$\frac{22}{10} \div 55 \Rightarrow \frac{\cancel{22}^2}{10} \times \frac{1}{\cancel{55}_5} = \frac{2}{50} = 0.04$$

(e) $3.66 \div 3$

$$\frac{366}{100} \div 3 \Rightarrow \frac{\cancel{366}^{122}}{100} \times \frac{1}{\cancel{3}_1} = \frac{\cancel{122}^{61}}{50} = \\ = \frac{61}{50} = 1.22$$

(f) $57.8 \div 34$

$$\frac{578}{10} \div 34 \Rightarrow \frac{\cancel{578}^{17}}{10} \times \frac{1}{\cancel{34}_2} = \frac{17}{10} = 1.7$$

(g) $80.6 \div 4$

$$\frac{806}{10} \div 4 \Rightarrow \frac{\cancel{806}^{403}}{10} \times \frac{1}{\cancel{4}_2} = \frac{403}{20} = 20.15$$

h. $8.19 \div 18 = 819/100 \times 1/18 = 819 / 1800 = 0.455$

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(i) $62.4 \div 52$ $\frac{62.4}{10} \div 52 \Rightarrow \frac{\cancel{62.4}^{12}}{10} \times \frac{1}{\cancel{52}_1} = \frac{12}{10} = 1.2$
(3) Solve the following.
(a) $292 \div 16$ $\frac{292}{100} \div \frac{16}{10} \Rightarrow \frac{\cancel{292}^{10}}{\cancel{100}_{10}} \times \frac{\cancel{10}_1}{\cancel{16}_8}$ $\Rightarrow \frac{\cancel{146}^{75}}{10} \times \frac{1}{\cancel{8}_4} = \frac{73}{40} = 1.825$
(b) $77 \div 35$ $\frac{77}{10} \div \frac{35}{10} \Rightarrow \frac{\cancel{77}^{11}}{\cancel{10}_1} \times \frac{\cancel{10}_1}{\cancel{35}_5} = \frac{11}{5} = 2.2$
(c) $437 \div 19$ $\frac{437}{100} \div \frac{19}{10} \Rightarrow \frac{\cancel{437}^{21}}{\cancel{100}_{10}} \times \frac{\cancel{10}_1}{\cancel{19}_1} \Rightarrow \frac{23}{10} = 2.3$
(d) $624 \div 78$ $\frac{624}{100} \div \frac{78}{10} \Rightarrow \frac{\cancel{624}^8}{\cancel{100}_{10}} \times \frac{\cancel{10}_1}{\cancel{78}_1} = \frac{8}{10} = 0.8$
(e) $273 \div 13$ $\frac{273}{100} \div \frac{13}{10} \Rightarrow \frac{\cancel{273}^{21}}{\cancel{100}_{10}} \times \frac{\cancel{10}_1}{\cancel{13}_1} = \frac{21}{10} = 2.1$
(f) $891 \div 33$ $\frac{891}{100} \div \frac{33}{10} \Rightarrow \frac{\cancel{891}^{27}}{\cancel{100}_{10}} \times \frac{\cancel{10}_1}{\cancel{33}_1} = \frac{27}{10} = 2.7$

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(g) $16.1 \div 4.6$

$$\frac{161}{10} \div \frac{46}{10} \Rightarrow \frac{161}{10} \times \frac{10}{46} \Rightarrow \frac{161}{46} = 3.5$$

$$\begin{array}{r} 3.5 \\ 46 \overline{) 7610} \\ \underline{-138} \\ 230 \\ \underline{-230} \\ 0 \end{array}$$

(h) $3.68 \div 0.4$

$$\frac{368}{100} \div \frac{4}{10} \Rightarrow \frac{368}{100} \times \frac{10}{4} = \frac{92}{10} = 9.2$$

(i) $9.24 \div 1.1$

$$\frac{924}{100} \div \frac{11}{10} \Rightarrow \frac{924}{100} \times \frac{10}{11} = \frac{84}{10} = 8.4$$

(4) In 5 bags 3.75 kg of flour is to be packed. How much flour will be in each bag?

Sol:

Flour in 5 bags = 3.75 kg

Flour in 1 bag = $3.75 \div 5$

$$\frac{375}{100} \div 5 \Rightarrow \frac{375}{100} \times \frac{1}{5} = \frac{75}{100} = 0.75 \text{ kg}$$

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(5) Sana wants to fill 67.5 liters of oil is to be poured in bottles.
 Find the number of bottle if :

(a) The capacity of the bottle is 4.5 litter.

(b) The capacity of the bottle is 2.5 litter.

Sol: (a) Liter of oil = 67.5

Capacity of one bottle = 4.5 liter

$$67.5 \div 4.5$$

$$\frac{675}{10} \div \frac{45}{10} \Rightarrow \frac{675}{10} \times \frac{10}{45} = \frac{675}{45} = 15 \text{ bottles}$$

(b) Total liter of oil = 67.5

Capacity of one bottle = 2.5 liter

$$67.5 \div 2.5$$

$$\frac{675}{10} \div \frac{25}{10} \Rightarrow \frac{675}{10} \times \frac{10}{25} = 27 \text{ bottles}$$

Exercise No: 5

(1) Convert the following into decimals.

(a) $\frac{45}{2}$

$$\begin{array}{r} 22.5 \\ 2 \overline{) 45} \\ \underline{-4} \\ 5 \\ \underline{-4} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

Sol:

$$\frac{45}{2} = 22.5$$

(b) $\frac{19}{25}$

$$\begin{array}{r} 0.76 \\ 25 \overline{) 190} \\ \underline{-175} \\ 150 \\ \underline{-150} \\ 0 \end{array}$$

Sol:

$$\frac{19}{25} = 0.76$$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(c) $\frac{7}{40}$ $\begin{array}{r} 0.175 \\ 4 \overline{) 7.00} \\ \underline{-4} \\ 3 \\ \underline{-2} \\ 100 \\ \underline{-80} \\ 200 \\ \underline{-160} \\ 400 \\ \underline{-400} \\ 0 \end{array}$ Sol: $\frac{7}{40} = 0.175$	(d) $\frac{33}{100}$ $\begin{array}{r} 0.33 \\ 100 \overline{) 33.00} \\ \underline{-30} \\ 300 \\ \underline{-300} \\ 0 \end{array}$ Sol: $\frac{33}{100} = 0.33$
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(e) $\frac{97}{8}$ $\begin{array}{r} 12.125 \\ 8 \overline{) 97.000} \\ \underline{-8} \\ 17 \\ \underline{-16} \\ 10 \\ \underline{-8} \\ 200 \\ \underline{-160} \\ 400 \\ \underline{-400} \\ 0 \end{array}$ Sol: $\frac{97}{8} = 12.125$	(f) $\frac{78}{8}$ $\begin{array}{r} 9.75 \\ 8 \overline{) 78.00} \\ \underline{-72} \\ 600 \\ \underline{-560} \\ 400 \\ \underline{-400} \\ 0 \end{array}$ Sol: $\frac{78}{8} = 9.75$
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(g) $\frac{34}{25}$ $\begin{array}{r} 1.36 \\ 25 \overline{) 34} \\ \underline{-25} \\ 90 \\ \underline{-75} \\ 150 \\ \underline{-150} \\ 0 \end{array}$ Sol: $\frac{34}{25} = 1.36$	(h) $\frac{2}{5}$ $\begin{array}{r} 0.4 \\ 5 \overline{) 20} \\ \underline{-20} \\ 0 \end{array}$ Sol: $\frac{2}{5} = 0.4$
(i) $\frac{55}{16}$ $\begin{array}{r} 3.4375 \\ 16 \overline{) 55} \\ \underline{-48} \\ 70 \\ \underline{-64} \\ 60 \\ \underline{-48} \\ 120 \\ \underline{-112} \\ 80 \\ \underline{-80} \\ 0 \end{array}$ Sol: $\frac{55}{16} = 3.4375$	(j) $\frac{69}{30}$ $\begin{array}{r} 2.3 \\ 30 \overline{) 69} \\ \underline{-60} \\ 90 \\ \underline{-90} \\ 0 \end{array}$ Sol: $\frac{69}{30} = 2.3$
(k) $\frac{72}{45}$	(l) $\frac{99}{55}$

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$\begin{array}{r} 1.6 \\ 4 \overline{) 72} \\ \underline{-45} \\ 270 \\ \underline{-270} \\ 0 \end{array}$ $\frac{72}{45} = 1.6$	$\begin{array}{r} 1.8 \\ 5 \overline{) 99} \\ \underline{-55} \\ 440 \\ \underline{-440} \\ 0 \end{array}$ $\frac{99}{55} = 1.8$
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(2) Noman ate $\frac{1}{8}$ of a pizza. How can we write this in decimal?

Sol: Noman ate pizza in fraction. $\frac{1}{8}$

$$\begin{array}{r} 0.125 \\ 8 \overline{) 10} \\ \underline{-8} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

Noma ate pizza in decimal = 0.125

Exercise No: 6

(1) Round – off the following decimals to one and two decimal places.

(a) 47.125 Sol: One decimal place = 47.1 Two decimal place = 47.13	(b) 4.732 Sol: One decimal place = 4.7 Two decimal place = 4.73
(c) 2.322 One decimal place = 2.3 Two decimal place = 2.32	(d) 0.942 One decimal place = 0.9 Two decimal place = 0.94

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(e) 45.675 Sol: One decimal place = 45.6 Two decimal place = 45.68	(f) 2.150 One decimal place = 2.2 Two decimal place = 2.15
(g) 91.547 Sol: One decimal place = 91.6 Two decimal place = 91.55	(h) 94.172 One decimal place = 94.2 Two decimal place = 94.17
(i) 5.183 One decimal place = 5.2 Two decimal place = 5.18	(j) 3.767 One decimal place = 3.8 Two decimal place = 3.77
(k) 4.172 One decimal place = 4.2 Two decimal place = 4.17	(l) 90.267 One decimal place = 90.3 Two decimal place = 90.27

(2) Estimate the sum of the given numbers.

(a) $52.90 + 17.98$ Sol: $52.90 \approx 53$ $17.98 \approx 18$ So, $52.90 + 17.98 \approx 53 + 18 = 71$ $\begin{array}{r} 52.90 \\ + 17.98 \\ \hline 70.88 \end{array}$ Verification: 70.88 Thus, Estimation is correct.	(b) $630.1 + 280.9$ Sol: $630.1 \approx 630$ $280.9 \approx 281$ So, $630.1 + 280.9 \approx 630 + 281 = 911$ $\begin{array}{r} 630.1 \\ + 280.9 \\ \hline 911.0 \end{array}$ Verification: 911.0 Thus, Estimation is correct.
(c) $41.01 + 36.87$ Sol: $41.01 \approx 41$ $36.87 \approx 37$ So, $41.01 + 36.87 \approx 41 + 37 = 78$ $\begin{array}{r} 41.01 \\ + 36.87 \\ \hline 77.88 \end{array}$ Verification: 77.88 Thus, Estimation is correct.	(d) $307.2 + 357.6$ Sol: $307.2 \approx 307$ $357.6 \approx 358$ So, $307.2 + 357.6 \approx 307 + 358 = 665$ $\begin{array}{r} 307.2 \\ + 357.6 \\ \hline 664.8 \end{array}$ Verification: 664.8 Thus, Estimation is correct.

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(e) $741.2 + 30.10$ Sol: $741.2 \approx 741$ $30.10 \approx 30$ So, $741.2 + 30.10 \approx 741 + 30 = 771$ Verification: $\begin{array}{r} 741.2 \\ + 30.10 \\ \hline 771.30 \end{array}$ Thus, Estimation is correct.	(f) $845.1 + 396.9$ Sol: $845.1 \approx 845$ $396.9 \approx 397$ So, $845.1 + 396.9 \approx 845 + 397 = 1242$ Verification: $\begin{array}{r} 845.1 \\ + 396.9 \\ \hline 1242.0 \end{array}$ Thus, Estimation is correct.
(g) $63.81 + 25.91$ Sol: $63.81 \approx 64$ $25.91 \approx 26$ So, $63.81 + 25.91 \approx 64 + 26 = 90$ Verification: $\begin{array}{r} 63.81 \\ + 25.91 \\ \hline 89.72 \end{array}$ Thus, Estimation is correct.	(h) $21.35 + 83.05$ Sol: $21.35 \approx 21$ $83.05 \approx 83$ So, $21.35 + 83.05 \approx 21 + 83 = 104$ Verification: $\begin{array}{r} 21.35 \\ + 83.05 \\ \hline 104.40 \end{array}$ Thus, Estimation is correct.
(i) $99.99 + 87.91$ Sol: $99.99 \approx 100$ $87.91 \approx 88$ So, $99.99 + 87.91 \approx 100 + 88 = 188$ Verification: $\begin{array}{r} 99.99 \\ + 87.91 \\ \hline 187.90 \end{array}$ Thus, Estimation is correct.	(j) $943.6 + 834.6$ So, $943.6 \approx 944$ $834.6 \approx 835$ $944 + 835 = 1779$ Verification: $\begin{array}{r} 943.6 \\ + 834.6 \\ \hline 1778.2 \end{array}$ Thus, Estimation is correct.
(k) $123.4 + 567.8$ So, $123.4 + 567.8 \approx 123 + 568 = 691$	(l) $737.8 + 721.2$ So, $737.8 + 721.2 \approx 738 + 721 = 1459$

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$\begin{array}{r} 123.4 \\ +567.8 \\ \hline 691.2 \end{array}$ Verification : 691.2 Thus, Estimation is correct.	$\begin{array}{r} 737.8 \\ +721.2 \\ \hline 1459.0 \end{array}$ Verification: 1459.0 Thus, Estimation is correct.
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(3) Estimate the difference of the given numbers.

(a) $22.30 - 17.99$ Sol: $22.30 \approx 22$ $17.99 \approx 18$ So, $22.30 - 17.99$ $\approx 22 - 18 = 4$ $\begin{array}{r} 22.30 \\ -17.99 \\ \hline 4.31 \end{array}$ Verification : 4.31 Thus, Estimation is correct.	(b) $78.92 - 69.11$ Sol: $78.92 \approx 79$ $69.11 \approx 69$ So, $78.92 - 69.11$ $\approx 79 - 69 = 10$ $\begin{array}{r} 78.92 \\ -69.11 \\ \hline 9.81 \end{array}$ Verification: 9.81 Thus, Estimation is correct.
(c) $56.23 - 11.25$ Sol: $56.23 \approx 56$ $11.25 \approx 11$ So, $56.23 - 11.25$ $\approx 56 - 11 = 45$ $\begin{array}{r} 56.23 \\ -11.25 \\ \hline 44.98 \end{array}$ Verification: 44.98 Thus, Estimation is correct.	(d) $234.6 - 159.8$ Sol: $234.6 \approx 235$ $159.8 \approx 160$ So, $234.6 - 159.8$ $\approx 235 - 160 = 75$ $\begin{array}{r} 234.6 \\ -159.8 \\ \hline 74.8 \end{array}$ Verification : 74.8 Thus, Estimation is correct.
(e) $587.6 - 320.9$ Sol: $587.6 \approx 588$ $320.9 \approx 321$ So, $587.6 - 320.9$ $\approx 588 - 321 = 267$	(f) $402.3 - 292.1$ Sol: $402.3 \approx 402$ $292.1 \approx 292$ So, $402.3 - 292.1$ $\approx 402 - 292 = 110$

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$\begin{array}{r} \overset{6}{5} \overset{1}{8} \overset{1}{7} . \overset{1}{6} \\ - \overset{1}{3} \overset{1}{2} \overset{1}{0} . \overset{1}{9} \\ \hline 2 \ 6 \ 6 . 7 \end{array}$ Verification: $\frac{587.6}{-320.9}$ Thus, Estimation is correct.	$\begin{array}{r} \overset{1}{\cancel{4}} \overset{1}{0} \overset{1}{2} . \overset{1}{3} \\ - \overset{1}{2} \overset{1}{9} \overset{1}{2} . \overset{1}{1} \\ \hline 1 \ 1 \ 0 . 2 \end{array}$ Verification: $\frac{402.3}{-292.1}$ Thus, Estimation is correct.
(g) $995.5 - 747.1$ Sol: $995.5 \approx 996$ $747.1 \approx 747$ So, $995.5 - 747.1$ $996 - 747 = 249$ $\begin{array}{r} \overset{1}{9} \overset{1}{9} \overset{1}{5} . \overset{1}{5} \\ - \overset{1}{7} \overset{1}{4} \overset{1}{7} . \overset{1}{1} \\ \hline 2 \ 4 \ 8 . 4 \end{array}$ Verification: $\frac{995.5}{-747.1}$ Thus, Estimation is correct.	(h) $673.1 - 430.5$ Sol: $673.1 \approx 673$ $430.5 \approx 431$ $\approx 673 - 431 = 242$ $\begin{array}{r} \overset{1}{6} \overset{1}{7} \overset{1}{\cancel{3}} . \overset{1}{1} \\ - \overset{1}{4} \overset{1}{3} \overset{1}{0} . \overset{1}{5} \\ \hline 2 \ 4 \ 2 . 6 \end{array}$ Verification: $\frac{673.1}{-430.5}$ Thus, Estimation is correct.
(i) $53.25 - 25.62$ Sol: $53.25 - 25.62$ $\approx 53 - 26 = 27$ $\begin{array}{r} \overset{1}{5} \overset{12}{3} . \overset{12}{2} \overset{12}{5} \\ - \overset{12}{2} \overset{12}{5} . \overset{12}{6} \overset{12}{2} \\ \hline 2 \ 7 . 6 \ 3 \end{array}$ Verification: $\frac{53.25}{-25.62}$ Thus, Estimation is correct.	(j) $544.1 - 41.45$ Sol: $544.1 \approx 544$ $41.45 \approx 41$ So, $544.1 - 41.45$ $\approx 544 - 41 = 503$ $\begin{array}{r} \overset{1}{5} \overset{1}{4} \overset{1}{4} . \overset{1}{\cancel{1}} \overset{1}{0} \\ - \overset{1}{4} \overset{1}{1} . \overset{1}{4} \overset{1}{5} \\ \hline 5 \ 0 \ 2 . 6 \ 5 \end{array}$ Verification: $\frac{544.1}{-41.45}$ Thus, Estimation is correct.
(k) $3.5 - 2.1$ Sol: $3.5 \approx 4$ $2.1 \approx 2$ So, $3.5 - 2.1$ $\approx 4 - 2 = 2$ $\begin{array}{r} \overset{1}{3} . \overset{1}{5} \\ - \overset{1}{2} . \overset{1}{1} \\ \hline 1 . 4 \end{array}$ Verification: $\frac{3.5}{-2.1}$ Thus, Estimation is correct.	(l) $9.355 - 7.316$ Sol: $9.355 \approx 9$ $7.316 \approx 7$ $9 - 7 = 2$ $\begin{array}{r} \overset{1}{9} . \overset{1}{3} \overset{1}{\cancel{5}} \overset{1}{5} \\ - \overset{1}{7} . \overset{1}{3} \overset{1}{1} \overset{1}{6} \\ \hline 2 . 0 \ 3 \ 9 \end{array}$ Verification: $\frac{9.355}{-7.316}$ Thus, Estimation is correct.

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

Exercise No: 7

1. Express the following in percentage.

(a) $\frac{4}{100}$ sol: $\frac{4}{100} = 4\%$	(b) $\frac{35}{100}$ sol: $\frac{35}{100} = 35\%$
(c) $\frac{76}{100}$ sol: $\frac{76}{100} = 76\%$	(d) $\frac{12}{100}$ sol: $\frac{12}{100} = 12\%$
(e) $\frac{28}{100}$ sol: $\frac{28}{100} = 28\%$	(f) $\frac{47}{100}$ sol: $\frac{47}{100} = 47\%$
(g) $\frac{45}{100}$ sol: $\frac{45}{100} = 45\%$	(h) $\frac{66}{100}$ sol: $\frac{66}{100} = 66\%$
(i) $\frac{89}{100}$ sol: $\frac{89}{100} = 89\%$	(j) $\frac{1}{100}$ sol: $\frac{1}{100} = 1\%$

(2) Convert the following percentage into fraction.

a. 13% Sol: $13\% = \frac{13}{100}$	b. 24% Sol: $24\% = \frac{24}{100}$
c. 46% sol: $46\% = \frac{46}{100}$	d. 55% Sol: $55\% = \frac{55}{100}$
e. 68% Sol: $68\% = \frac{68}{100}$	f. 72% Sol: $72\% = \frac{72}{100}$
g. 87% Sol: $87\% = \frac{87}{100}$	h. 98% Sol: $98\% = \frac{98}{100}$
i. 11% Sol: $11\% = \frac{11}{100}$	j. 10% Sol: $10\% = \frac{10}{100}$

3) Convert the following percentage into decimals.

a. $15\% = 15\% = \frac{15}{100} = 0.15$	b. $26\% = 26\% = \frac{26}{100} = 0.26$
c. $47\% = 47\% = \frac{47}{100} = 0.47$	d. $52\% = 52\% = \frac{52}{100} = 0.52$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

e. $63\% = 63\% = \frac{63}{100} = 0.63$	f. $74\% = 74\% = \frac{74}{100} = 0.74$
g. $85\% = 85\% = \frac{85}{100} = 0.85$	h. $96\% = 96\% = \frac{96}{100} = 0.96$
i. $17\% = 17\% = \frac{17}{100} = 0.17$	j. $18\% = 18\% = \frac{18}{100} = 0.18$

(4) Convert the following fraction into percentage.

(a) $\frac{1}{10}$ $\frac{1}{10} = \frac{1 \times 10}{10 \times 10}$ Sol: $= \frac{10}{100}$ $= 10\%$	(b) $\frac{2}{5}$ $\frac{2}{5} = \frac{2 \times 20}{5 \times 20}$ Sol: $= \frac{40}{100}$ $= 40\%$
(c) $\frac{4}{10}$ $\frac{4}{10} = \frac{4 \times 10}{10 \times 10}$ Sol: $= \frac{40}{100}$ $= 40\%$	(d) $\frac{9}{25}$ $\frac{9}{25} = \frac{9 \times 4}{25 \times 4}$ Sol: $= \frac{36}{100}$ $= 36\%$
(e) $\frac{3}{20}$ $\frac{3}{20} = \frac{3 \times 5}{20 \times 5}$ Sol: $= \frac{15}{100}$ $= 15\%$	(f) $\frac{21}{50}$ $\frac{21}{50} = \frac{21 \times 2}{50 \times 2}$ Sol: $= \frac{42}{100}$ $= 42\%$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(g) $\frac{1}{5}$ $\frac{1}{5} = \frac{1 \times 20}{5 \times 20}$ Sol: $= \frac{20}{100}$ $= 20\%$	(h) $\frac{7}{20}$ $\frac{7}{20} = \frac{7 \times 5}{20 \times 5}$ Sol: $= \frac{35}{100}$ $= 35\%$
(i) $\frac{9}{10}$ $\frac{9}{10} = \frac{9 \times 10}{10 \times 10}$ Sol: $= \frac{90}{100}$ $= 90\%$	(j) $\frac{6}{25}$ $\frac{6}{25} = \frac{6 \times 4}{25 \times 4}$ Sol: $= \frac{24}{100}$ $= 24\%$

(5) Convert the following decimals into percentage.

(a) 0.06 $0.06 = \frac{6}{100} = 6\%$	(b) 0.14 $0.14 = \frac{14}{100} = 14\%$
(c) 0.23 $0.23 = \frac{23}{100} = 23\%$	(d) 0.34 $0.34 = \frac{34}{100} = 34\%$
(e) 0.43 $0.43 = \frac{43}{100} = 43\%$	(f) 0.55 $0.55 = \frac{55}{100} = 55\%$
(g) 0.63 $0.63 = \frac{63}{100} = 63\%$	(h) 0.71 $0.71 = \frac{71}{100} = 71\%$
(i) 0.98 $0.98 = \frac{98}{100} = 98\%$	(j) 0.3 $0.3 = \frac{3}{10} = \frac{3 \times 10}{10 \times 10} = 30\%$

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(6) Sajid scored 3 6 5 marks out of 5 0 0. What percentage did he score? Total marks = 5 0 0 Scored marks = 3 6 5 $= \frac{365}{500}$ $= \frac{73}{100}$ Percentage = $\frac{73}{100}$ = 73 % Thus, Sajid scored 73 % marks.	(7) There are 40 students in a class. If 5 % are absent on Monday, Find: (a) The number of absent students. Total number of student = 40 Absent students on Monday = 5 % of 40 $= \frac{5}{100} \times 40 = \frac{5 \times 4}{10}$ $= \frac{20}{10} = 2$ Thus, 2 students are absent on Monday.
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(Q7) (b) The number of present students.

Total number of students = 40

Number of absent students = 2

Present students on Monday = $40 - 2 = 38$

Thus, 38 students present on Monday.

(8) In an exam, 450 students appeared. 25 % got first division, 55 % got second division and the rest just passed the exam. Find the number of students who just passed the exam.

Number of students appeared in exam = 450

Percentage of students got first division = 25 % of 450

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

$= \frac{25}{100} \times 450$ $= \frac{25 \times 45}{10}$ $= \frac{1125}{10}$ $= 112.5$	Percentage of students got first division. = 55 % of 450 $= \frac{55}{100} \times 450$ $= \frac{55 \times 45}{10}$ $= \frac{2475}{10}$ $= 247.5$
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Number of students who just passed the exam =

$$= 450 - (112.5 + 247.5)$$

$$= 450 - 360 = 90$$

Thus 90 students just passed the exam.

(9) 12 % apples in a basket are red. Write this percentage in fraction and decimal.

$= \frac{12}{100}$ $= \frac{3}{25}$	Red apple in a basket = $= \frac{12}{100} = 0.12$
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Number of red apples in decimal = $\frac{12}{100} = 0.12$

Thus, 12 % of red apples can be written in fraction is

$$= \frac{3}{25} \text{ and in decimal is } 0.12.$$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(10) A tank can hold 85 liters of water. Its 40 % filled. What percentage of the tank is empty? Write the answer in decimal and fraction.

Capacity of water in tank = 85 ℓ.

Tank that is filled = 40 %

Empty water = 100 % - 40 % = 60 %

Fraction = 60 % = $\frac{60}{100} = \frac{6}{10} = \frac{3}{5}$

Decimal = 60 % = $\frac{60}{100} = 0.6$

70 can be written in fraction = $70\% = \frac{70}{100} = \frac{7}{10}$

Thus, 70 % tank is empty and 70 % can be written in fraction as $\frac{7}{10}$ and in decimal as 0.7.

Review Exercise

1. Encircle the correct option.

(a) Putting 0 at the right of a decimal does not affect its value.

(i) 100 **(ii) 0** (iii) 1 (iv) 10

(b) When multiplying a decimal by 100, we move decimal point 2 places to the right.

(i) Left (ii) Down (iii) Up **(iv) Right**

(c) We represent percentage by the symbol %.

(i) $\leq$ (ii) $\varnothing$ (iii) $\div$ **(iv) %**

(d) 20% of 540 is 108.

(i) 37 **(ii) 108** (iii) 27 (iv) 270

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(e) Percentage is a special kind of fraction whose denominator is always 100.

- (i) 1 (ii) 10 **(iii) 100** (iv) 1000

(2) Compare the following decimals.

Using the correct symbol ($>$, $<$, or $=$)

- (a) $0.5 \leq 0.8$ (b) $1.8 \geq 1.4$
 (c) $45.67 \leq 45.77$ (d) $7.78 \geq 7.70$
 (e) $1.56 = 1.56$ (f) $34.23 \leq 62.42$

(3) Solve the following.

(a) $5.242 + 9.003$ $\begin{array}{r} 5.242 \\ + 9.003 \\ \hline 14.245 \end{array}$	(b) $3.622 + 22.971$ $\begin{array}{r} 3.622 \\ + 22.971 \\ \hline 26.593 \end{array}$
(c) $4.32 + 90.16$ $\begin{array}{r} 4.32 \\ + 90.16 \\ \hline 94.48 \end{array}$	(d) $13.12 + 86.57$ $\begin{array}{r} 13.12 \\ + 86.57 \\ \hline 99.69 \end{array}$
(e) $58.57 + 6.118$ $\begin{array}{r} 58.57 \\ + 6.118 \\ \hline 64.688 \end{array}$	(f) $04.561 + 27.16$ $\begin{array}{r} 04.561 \\ + 27.16 \\ \hline 31.721 \end{array}$
(g) $92.93 - 31.33$ $\begin{array}{r} 92.93 \\ - 31.33 \\ \hline 61.60 \end{array}$	(h) $8.25 - 4.97$ $\begin{array}{r} 8.25 \\ - 4.97 \\ \hline 3.28 \end{array}$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

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- (i) 1 (ii) 10 **(iii) 100** (iv) 1000

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(3) Solve the following.

(a) $5.242 + 9.003$ $\begin{array}{r} 5.242 \\ + 9.003 \\ \hline 14.245 \end{array}$	(b) $3.622 + 22.971$ $\begin{array}{r} 3.622 \\ + 22.971 \\ \hline 26.593 \end{array}$
(c) $4.32 + 90.16$ $\begin{array}{r} 4.32 \\ + 90.16 \\ \hline 94.48 \end{array}$	(d) $13.12 + 86.57$ $\begin{array}{r} 13.12 \\ + 86.57 \\ \hline 99.69 \end{array}$
(e) $58.57 + 6.118$ $\begin{array}{r} 58.57 \\ + 6.118 \\ \hline 64.688 \end{array}$	(f) $04.561 + 27.16$ $\begin{array}{r} 04.561 \\ + 27.16 \\ \hline 31.721 \end{array}$
(g) $92.93 - 31.33$ $\begin{array}{r} 92.93 \\ - 31.33 \\ \hline 61.60 \end{array}$	(h) $8.25 - 4.97$ $\begin{array}{r} 8.25 \\ - 4.97 \\ \hline 3.28 \end{array}$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(i) $4.63 - 1.21$ $\begin{array}{r} 4.63 \\ -1.21 \\ \hline 3.42 \end{array}$	(j) $22.92 - 2.001$ $\begin{array}{r} 22.920 \\ -2.001 \\ \hline 20.919 \end{array}$
(k) $6.119 - 1.55$ $\begin{array}{r} 6.119 \\ -1.55 \\ \hline 4.569 \end{array}$	(l) $20.36 - 6.211$ $\begin{array}{r} 20.360 \\ -6.211 \\ \hline 14.149 \end{array}$
(4) Ahmad wants to buy a chocolate which costs Rs. 98.46. He has Rs. 52.25 how much more money does he need to buy chocolate? Sol: Ahmad has = 52.25 Price of a chocolate = 98.46 Ahmad needs money = 46.21	$\begin{array}{r} 98.46 \\ -52.25 \\ \hline 46.21 \end{array}$

(5) Omar bought two rolls of tape. The first roll has 16.38 meter of tape and the second roll has 56.82 meters of tape.

Find

- (a) How much tape was there in both of the rolls altogether?
 (b) Which roll has more tape and how much?

Sol: (a)

First roll of tape = 16.38 meter

Second roll of tape = 56.82 meter

Roll of tape altogether = $16.38 + 56.82 = 73.20$ meter

$$\begin{array}{r} 16.38 \\ +56.82 \\ \hline 73.20 \end{array}$$

(5b) Second roll has more tape = 40.44 meter

$$\begin{array}{r} 56.82 \\ -16.38 \\ \hline 40.44 \end{array}$$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(6) In a fabric warehouse there was 43.5 meters of coloured cloth. If it is cut into equal pieces of 1.5 meters,

Find:

(a) How many pieces of cloth will be obtained?

(b) What will be the total length of 12 pieces of cloth length 1.5 meters?

Coloured cloth = 43.5 meter

Cut equal parts = 1.5 meter

Obtained pieces of cloth = 29 pieces

(a) $43.5 \div 1.5$

$$\frac{43.5}{1.0} \div \frac{1.5}{1.0} \Rightarrow \frac{43.5}{1.0} \times \frac{1.0}{1.5} = 29$$

(b) Total length of 12 pieces in length of 1.5 = 18 meters Ans.

$$12 \times 1.5$$

$$\begin{array}{r} 12 \\ \times 1.5 \\ \hline 60 \\ 120 \\ \hline 180 \end{array}$$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(7) Solve the following.

(a) 32.855×10 $\begin{array}{r} 32.855 \\ \times 10 \\ \hline 00000 \\ +328550 \\ \hline 328550 \\ \text{Ans} = 328.55 \end{array}$	(b) 4.39×100 $\begin{array}{r} 4.39 \\ \times 100 \\ \hline 000 \\ 0000 \\ 43900 \\ \hline 3900 \\ \text{Ans} = 439 \end{array}$
(c) 5.98×1000 $\begin{array}{r} 5.98 \\ \times 1000 \\ \hline 000 \\ 0000 \\ 00000 \\ 598000 \\ \hline 598000 \\ \text{Ans} = 5980 \end{array}$	(d) $6.54 \times 21 = 137.34$ $\begin{array}{r} 6.54 \\ \times 21 \\ \hline 654 \\ 13080 \\ \hline 13734 \\ \text{Ans} = 137.34 \end{array}$
(e) 4.14×43 $\begin{array}{r} 4.14 \\ \times 43 \\ \hline 1242 \\ 16560 \\ \hline 17802 \\ \text{Ans} = 178.02 \end{array}$	(f) 7.17×6.5 $\begin{array}{r} 7.17 \\ \times 6.5 \\ \hline 3585 \\ +43020 \\ \hline 46605 \\ \text{Ans} = 46.605 \end{array}$

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

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(a) 32.855×10 $\begin{array}{r} 32.855 \\ \times 10 \\ \hline 00000 \\ +328550 \\ \hline 328550 \\ \text{Ans} = 328.55 \end{array}$	(b) 4.39×100 $\begin{array}{r} 4.39 \\ \times 100 \\ \hline 000 \\ 0000 \\ 43900 \\ \hline 3900 \\ \text{Ans} = 439 \end{array}$
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MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(g) 69.7×2.31 $ \begin{array}{r} \begin{array}{r} \overset{1}{6} \overset{1}{9} \overset{1}{7} \\ \times 2.31 \\ \hline 697 \\ 20910 \\ + 139400 \\ \hline 161007 \end{array} \\ \text{Ans} = 161.007 \end{array} $	(h) $2.19 \times 4.87 = 10.6653$ $ \begin{array}{r} \begin{array}{r} \overset{1}{2} \overset{1}{1} \overset{1}{9} \\ \times 4.87 \\ \hline 1533 \\ 17520 \\ + 87600 \\ \hline 106653 \end{array} \\ \text{Ans} = 10.6653 \end{array} $
(i) 4.13×6.12 $ \begin{array}{r} \begin{array}{r} \overset{1}{4} \overset{1}{1} \overset{1}{3} \\ \times 6.12 \\ \hline 826 \\ 4130 \\ 247800 \\ \hline 252756 \end{array} \\ \text{Ans} = 25.2756 \end{array} $	(j) $82.6 \div 100$ $ \begin{array}{r} 82.6 \\ \hline 100 \\ \hline 0.826 \end{array} $ 500 $\sqrt{413000}$ $ \begin{array}{r} 413 \\ 500 \\ \hline 1300 \\ 1000 \\ \hline 3000 \\ 3000 \\ \hline 0 \end{array} $ = 0.826

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(k) $3.12 \div 1.3$ $\frac{312}{100} \div \frac{13}{10}$ $\frac{312}{100} \times \frac{10}{13} = \frac{24}{10}$ $\frac{24}{10} = 2.4$ Ans = 2.4	(l) $4.21 \div 2.5$ $\frac{421}{100} \div \frac{25}{10}$ $\frac{421}{100} \times \frac{10}{25} = \frac{421}{250}$ 1.684 Ans = 1.684
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8) Estimate the sum and difference of the given numbers.

(a) $63.11 + 2.809$ $63.11 + 2.809$ $= 65.919$ Ans = 65.919	(b) $74.1 + 3.9$ $74.1 + 3.9$ $= 78.0$ Ans = 78
(c) $521.2 + 479.8$ $521.2 + 479.8$ $= 1001.0$ Ans = 1001	(d) $74.92 - 36.02$ $74.92 - 36.02$ $= 38.90$ Ans = 38.90

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(e) $324.6 - 241.6$ $\begin{array}{r} 324.6 \\ -241.6 \\ \hline 83.0 \end{array}$ Ans= 83	(f) $888.8 - 479.2$ $\begin{array}{r} 888.8 \\ -479.2 \\ \hline 409.6 \end{array}$ Ans= 409.6
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(9) Round off the following decimals to the nearest tenths and hundredths.

Decimals	Rounded off upto 1 Decimal place (nearest tenths)	Rounded off Upto 2 decimal places (nearest hundredths)
(a) 2.2342	2.2	2.23
(b) 3.1723	3.2	3.17
(c) 5.3671	5.4	5.37
(d) 9.5191	9.5	9.52

(10) Complete the table.

Fractions	Decimals	Percent
(a) $\frac{21}{50}$	0.42	42%
(b) $\frac{82}{100}$	0.82	82%
(c) $\frac{7}{25}$	0.28	28%
(d) $\frac{65}{100}$	0.65	65%
(e) $\frac{25}{100}$	0.25	25%

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

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--	--

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MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(11) Junaid spent Rs. 4 3 2 at of Rs. 6 0 0. What is the percentage of the total amount spent by Junaid?

Write the answer in fraction and decimals form.

Total amount = 600

Amount spent = 432

$$\text{percentage of total amount spent} = \frac{432}{600} = 72\%$$

$$\text{In fraction form} = \frac{72}{100}$$

$$\text{in decimal form} = 72\% = \frac{72}{100} = 0.72$$

$$\text{Decimal} = 0.72 \text{ Percentage} = 72\%$$

(12) There are 3 2 students in a class. If 2 5 % students wear glasses, find;

(a) The number of students who wear glasses?

(b) How many students do not wear glasses?

(a) Total students = 3 2

Students wear glasses = 2 5 %

$$\text{Students wear glasses} = \frac{25}{100} \times 32$$

$$\frac{25}{100} \times 32 = 8 \text{ students.}$$

(b) Students do not wear glasses = 3 2 - 8 = 2 4 students.

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

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$$\text{Decimal} = 0.72 \text{ Percentage} = 72\%$$

(12) There are 32 students in a class. If 25% students wear glasses, find;

(a) The number of students who wear glasses?

(b) How many students do not wear glasses?

(a) Total students = 32

Students wear glasses = 25%

$$\text{Students wear glasses} = \frac{25}{100} \times 32$$

$$\frac{25}{100} \times 32 = 8 \text{ students.}$$

(b) Students do not wear glasses = 32 - 8 = 24 students.

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

(13) A mathematics paper has 20 questions out of which 60% are based on numbers and operations.

(a) How many questions are based on number and operations?

(b) Write the number of remaining questions in fraction and decimals.

Sol:

(a) Total questions in paper = 20

Numbers and operations questions = 60%

$$\frac{60}{100} \times 20 = \text{questions.}$$

(b) Remaining questions = $20 - 12 = 8$

Fractions = $\frac{8}{20}$ Decimal = 0.4

$$\begin{array}{r} 0.4 \\ 20 \overline{) 80} \\ \underline{-80} \\ 0 \end{array}$$

