

First Term

2015 – 2016

Primary 5

Name:

Class:

Revision

- ✓ Write the following numbers in the form of decimal numbers (as shown):

$$12 \frac{20}{50} = 12 \frac{4}{10} = 12.4$$

1) $\frac{5}{2} = \dots\dots\dots$

6) $\frac{129}{50} = \dots\dots\dots$

2) $\frac{55}{50} = \dots\dots\dots$

7) $\frac{115}{500} = \dots\dots\dots$

3) $\frac{36}{30} = \dots\dots\dots$

8) $3 \frac{71}{4} = \dots\dots\dots$

4) $\frac{95}{25} = \dots\dots\dots$

9) $71 \frac{7}{250} = \dots\dots\dots$

5) $8 \frac{3}{25} = \dots\dots\dots$

10) $16 \frac{16}{1000} = \dots\dots\dots$

- ✓ Write the following numbers as fraction:

1) $7.35 = \dots\dots\dots$

5) $63.23 = \dots\dots\dots$

2) $12.56 = \dots\dots\dots$

6) $70.07 = \dots\dots\dots$

3) $6.07 = \dots\dots\dots$

7) $24.24 = \dots\dots\dots$

4) $9.003 = \dots\dots\dots$

8) $367.03 = \dots\dots\dots$

✓ **Find the result then approximate it:**

1) $32.27 + 13.5 = \dots \approx \dots$ nearest tenth

2) $18.07 + 421.45 = \dots \approx \dots$ nearest tenth

3) $854.49 - 32.71 = \dots \approx \dots$ nearest tenth

4) $743.65 - 512.28 = \dots \approx \dots$ nearest tenth

5) $326.3 - 306.212 = \dots \approx \dots$ nearest tenth

6) $2.333 + 5.444 = \dots \approx \dots$ nearest tenth

7) $354.908 + 412.723 = \dots \approx \dots$ nearest tenth

✓ **Complete:**

1) $736.5 \approx 737$ it approximated to the nearest

2) $2650 \approx 3000$ it approximated to the nearest

3) $9237.9 \approx 9000$ it approximated to the nearest

4) $4908 \approx 4900$ it approximated to the nearest

5) $9553 \approx 10000$ it approximated to the nearest

Unit (1)

Fractions

- ***Lesson 1: Approximation to the nearest hundredths.***
- ***Lesson 2: Comparing and ordering fractions.***
- ***Lesson 3: Multiplying by decades 10 , 100 , 1000 , ----***
- ***Lesson 4: Dividing by decades 10 , 100 , 1000 , ----***
- ***Lesson 5: Multiplying fraction.***
- ***Lesson 6: Dividing fractions.***
- ***Lesson 7: Multiplying decimal fractions***
- ***Lesson 8: Dividing by decimal fractions and by decimal number.***

Approximation = Appr.

Lesson 1

Approximation

to the Nearest hundredths

➤ Remember the place value of each digit of the number:

Ex:--

The whole number			D. point	The decimal part		
H	Tens	Unit		^{1st} Tenths	^{2nd} Hundredths	^{3rd} Thousandths
				$\frac{1}{-} = 0.1$	$\frac{1}{-} = 0.01$	$\frac{1}{-} = 0.001$
3	2	5	.	9	6	1

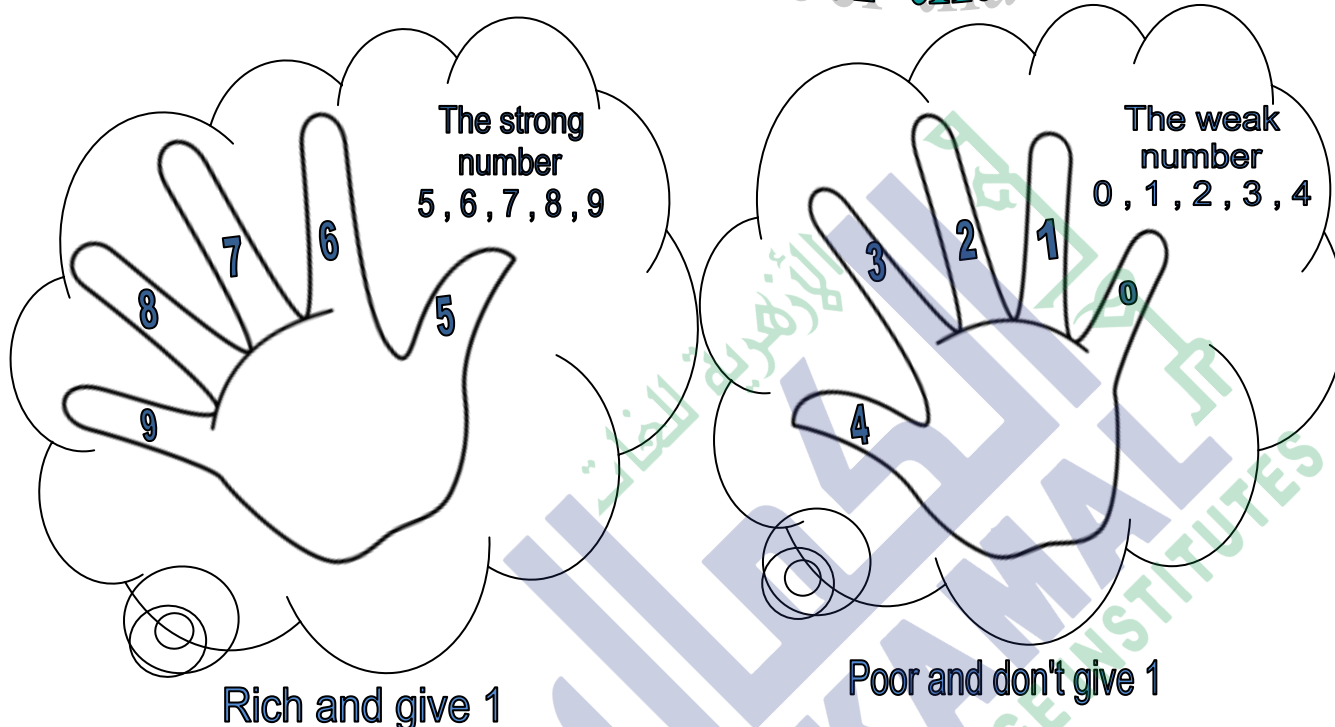
Rule:

To approximate to the nearest hundredth.

Look at the thousandths digit if it is less than 5, cancel all the digits that right the hundredths digit $5.681 \approx 5.68$

If it is 5 or more, cancel all the digits that right the hundredths digit (and add one to the hundredths digit)

Remember that



(1) Approximate the following numbers to the nearest hundredth:

1) $76.514 \approx \dots\dots\dots$ 7) $52.608 \approx \dots\dots\dots$

2) $175.325 \approx \dots\dots\dots$ 8) $69.743 \approx \dots\dots\dots$

3) $3 \frac{3}{4} \approx \dots\dots\dots$ 9) $0.737 \approx \dots\dots\dots$

4) $3 \frac{17}{500} \approx \dots\dots\dots$ 10) $3 \frac{1}{8} \approx \dots\dots\dots$

5) $37.4289 - 14.081 \approx \dots\dots\dots$ 11) $4357 \div 1000 \approx \dots\dots\dots$

6) $3 \frac{3}{4} - 1 \frac{3}{200} \approx \dots\dots\dots$ 12) $13.376 + 15.75 \approx \dots\dots\dots$

(2) Approximate the following numbers to the nearest thousandth:

1) $43.5426 \approx \dots\dots\dots$

5) $537.2983 \approx \dots\dots\dots$

2) $21.84792 \approx \dots\dots\dots$

6) $0.38327 \approx \dots\dots\dots$

3) $6.5297 \approx \dots\dots\dots$

7) $2.57819 \approx \dots\dots\dots$

4) $3.99999 \approx \dots\dots\dots$

8) $3 \frac{5}{8} \approx \dots\dots\dots$

(3) Complete:

1) The number $4.559 \approx 4.6$ to the nearest $\dots\dots\dots$

2) $3 \frac{3}{4} - 1 \frac{3}{200} = \dots\dots\dots \approx$ to nearest $\frac{1}{100}$

3) The difference between $\frac{41}{500}$, $0.473 = \dots\dots \approx \dots\dots$ to nearest $\frac{1}{10}$

4) $736.592 \approx 736.59$ to the nearest $\dots\dots\dots$

5) $82.497 \approx 82.50$ to the nearest $\dots\dots\dots$

6) $83.7695 \approx 83.77$ to the nearest $\dots\dots\dots$

7) $10.2939 \approx 10.294$ to the nearest $\dots\dots\dots$

8) $521.291 \approx 521.3$ to the nearest $\dots\dots\dots$

(4) Given that $X = 13.452$ $Y = 7.273$:

Find $X + Y$ approximate the result to the nearest 2 decimal places, Estimate the sum of $X + Y$ is your estimation acceptable. Explain.

Solution:

(5) Write the smallest decimal fraction that includes the digits (2 , 5 , 7 , 8) then approximate the number to the nearest hundredth and thousandth

(6) A road extends for 74389 m find its length in kilometer approximating the result to the nearest hundredth.

(7) Write three numbers if we approximate them to the nearest hundredth the result will be 52.68

(8) Write the three numbers if we approximate them to the nearest thousandth the result will be 9.035

Lesson 2

Comparing and ordering fractions

➤ **With the same denominator:**

Look at the greater numerator!

$$\frac{6}{7} > \frac{5}{7} \quad \text{numerator}$$

➤ **With the same numerator:**

Look at the smaller denominator!

$$\frac{4}{5} > \frac{4}{7} \quad \text{denominator}$$

➤ **With different numerator and denominator:**

We have 2 method.

Ex.(1): The scissors way.

$$\begin{array}{ccc} \textcircled{18} & \frac{3}{4} & \frac{5}{6} \textcircled{20} \\ & \text{X} & \\ 18 & < & 20 \\ \frac{3}{4} & < & \frac{5}{6} \end{array}$$

Ex.(2): Simplify the bigger fraction if it can.

$$\begin{array}{ccc} \frac{1}{3} & \square & \frac{28 \div 4}{12 \div 4} \\ \frac{1}{3} & \square & \frac{7}{3} \end{array}$$

(1) Put (< , > or =):

1) $\frac{3}{8}$ 1

11) $\frac{3}{5}$ $\frac{3}{8}$

2) $\frac{3}{8}$ 0.5

12) $\frac{3}{5}$ $\frac{1}{2}$

3) $\frac{5}{8}$ $\frac{3}{8}$

13) $\frac{3}{5}$ $\frac{6}{10}$

4) $\frac{7}{13}$ $\frac{5}{13}$

14) $\frac{3}{4}$ $\frac{2}{5}$

5) $\frac{8}{25}$ $\frac{8}{13}$

15) $\frac{7}{12}$ $\frac{4}{5}$

6) $\frac{7}{9}$ $2\frac{1}{9}$

16) $\frac{7}{9}$ $\frac{3}{4}$

7) $\frac{4}{5}$ $\frac{3}{7}$

17) $\frac{3}{5}$ $\frac{5}{8}$

8) $\frac{7}{8}$ $\frac{6}{7}$

18) $1\frac{3}{4}$ $\frac{1}{3}$

9) $7\frac{3}{8}$ $8\frac{3}{4}$

19) 0.7 $\frac{73}{5}$

10) $1\frac{3}{4}$ $\frac{1}{3}$

12) $\frac{2}{2}$ 1

(2) Arrange the following numbers ascendingly:

1) $\frac{7}{18}$, $\frac{5}{18}$, $\frac{1}{18}$, $\frac{25}{18}$, $\frac{13}{18}$
.....

2) $\frac{13}{7}$, $\frac{5}{7}$, $\frac{9}{7}$, $\frac{4}{7}$, $\frac{11}{7}$
.....

3) $\frac{11}{12}$, $\frac{5}{12}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$
.....

(3) Arrange the following fractions descending:

1) $7\frac{1}{6}$, 5.3 , $7\frac{2}{11}$, $5\frac{4}{7}$, 6

.....

.....

.....

.....

.....

2) 8 , $11\frac{4}{5}$, $12\frac{3}{7}$, $\frac{61}{7}$, 12.4

.....

.....

.....

.....

.....

3) $\frac{12}{15}$, $\frac{12}{7}$, $\frac{12}{17}$, $\frac{12}{13}$, $\frac{12}{5}$

.....

4) $\frac{3}{2}$, $\frac{3}{5}$, $\frac{3}{8}$, $\frac{6}{8}$, $\frac{18}{21}$

.....

.....

5) $4\frac{5}{8}$, $4\frac{5}{6}$, $5\frac{3}{4}$, $2\frac{3}{4}$

.....

6) $\frac{3}{2}$, $\frac{3}{5}$, $\frac{3}{8}$

.....

.....

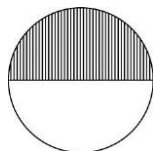
7) $\frac{18}{21}$, $\frac{6}{8}$, $\frac{6}{8}$

.....

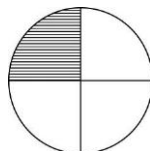
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(4) State what the colored section represents in each figure, then rearrange the fractions ascendingly:

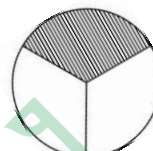
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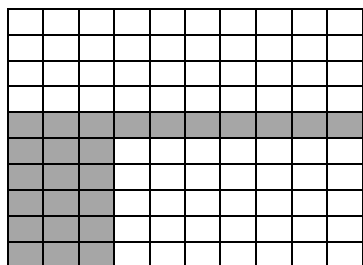
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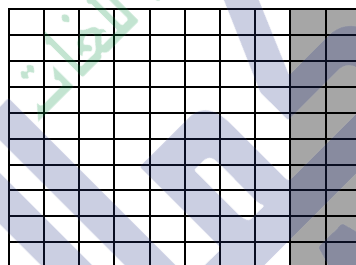
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Ascending Rearrange

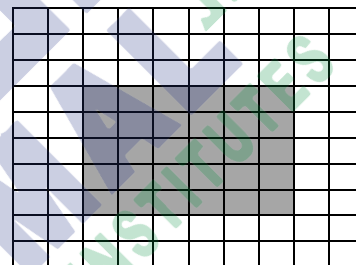
2)



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.....

Ascending Rearrange

(5) Put (✓) or (x):

1) $4376 < 0.407$ ()

4) $50.61 > 0.501$ ()

2) $\frac{7}{8} = 0.775$ ()

5) $3.5 > 3\frac{4}{9}$ ()

3) $2\frac{7}{9} < 2.7$ ()

6) $\frac{1}{4} = 0.25$ ()

(6) Find the values of a , b , and c if:

1) $\frac{2}{5} = \frac{a}{15}$

Then a =

2) $\frac{b}{8} = \frac{15}{24}$

.....

3) $\frac{2}{3} = \frac{16}{c}$

.....

Lesson 3

Multiplying by decades 10, 100, 1000, ~~~~

- when we multiplying a decimal number by 10, we move the decimal point one place to the right.

The number becomes 10 times bigger.

Ex.: $3.75 \times 10 = 37.5$

because $3.75 = \frac{375}{100}$ and $\frac{375}{100} \times 10 = \frac{375}{10} = 37.5$

- When we multiply a decimal number by 100, we move the decimal point two places to the right.

Ex.: $3.75 \times 100 = 375$

because $3.75 = \frac{375}{100}$ and $\frac{375}{100} \times 100 = 375$

Rule:

In multiplying by decades, the decimal point moves to the right according to the number of zeros in 10, 100, 1000

Ex.: $3.75 \times 1000 = 3750$

The decimal point has to move to the right 3 digits because we have 3 zeros, and if we don't have enough digits, we have to put a zero in the place of each digit.

Ex.: $0.9 \times 10000 = 9000$

Exercises

Remember

When we **Multiply** we'll move to **Right**

(1) Complete:

- | | |
|---|--|
| 1) $3.18 \times 10 = \dots\dots\dots$ | 14) $3.2 \times 10 = \dots\dots\dots$ |
| 2) $72.14 \times 100 = \dots\dots\dots$ | 15) $9.7 \times 100 = \dots\dots\dots$ |
| 3) $62.819 \times 1000 = \dots\dots\dots$ | 16) $0.341 \times 1000 = \dots\dots\dots$ |
| 4) $(72.12 + 2.7) \times 10 = \dots\dots\dots$ | 17) $(8.35 - 2.14) \times 100 = \dots\dots\dots$ |
| 5) $35.321 \times 10 = \dots\dots\dots$ | 18) $27.134 \times 100 = \dots\dots\dots$ |
| 6) $12.3 \times 1000 = \dots\dots\dots$ | 19) $3.2172 \times 1000 = \dots\dots\dots$ |
| 7) $5.748 \times 100 = \dots\dots\dots$ | 20) $13.54 \times 10 = \dots\dots\dots$ |
| 8) $7.32 \times 1000 = \dots\dots\dots$ | 21) $13.54 \times 10 = \dots\dots\dots$ |
| 9) $(2.35 \times 10) - 11.1 = \dots\dots\dots$ | |
| 10) $(72.12 + 2.7) \times 10 = \dots\dots\dots$ | |
| 11) $(32.5 - 13.725) \times 10 = \dots\dots\dots$ | |
| 12) $(25.671 \times 100) - (13.125 \times 100) = \dots\dots\dots$ | |
| 13) $(8.35 - 2.14) \times 100 = \dots\dots\dots$ | |

(2) Choose the correct answer from the parentheses:

- | | |
|--|-------------------------------|
| 1) $98.7 \times 100 = \dots\dots\dots$ | (987 – 9870 – 0.987 – 0.0987) |
| 2) $0.067 \times 1000 = \dots\dots\dots$ | (6.7 – 67 – 0.067 – 670) |
| 3) $21.3 \times 10 = \dots\dots\dots$ | (2130 – 2.13 – 213 – 0.0213) |

(3) Put (< , > or =) in the empty spaces:

- | | | |
|-----------------------|----------------------|-----------------------|
| 1) 4.72×10 | <input type="text"/> | 0.472×100 |
| 2) 3.251×100 | <input type="text"/> | 325.1×100 |
| 3) 72.15×10 | <input type="text"/> | 0.07215×1000 |

Lesson 4

Dividing by decades 10, 100, 1000, ~~~~

- When we divide a number by 10, we move the decimal point one place to the left.

ie.:

The number becomes 10 times smaller.

Ex.:

$$145.75 \div 10 = 14.572$$

because $145.72 = \frac{14572}{100}$

and $\frac{14572}{100} \div 10 = \frac{14572}{100} \times \frac{1}{10} = \frac{14572}{1000} = 14.572$

- When we divide a number by 100, we move the decimal point two places to the left.

Ex.:

$$145.72 \div 100 = 1.4572$$

Rule:

In dividing by decades, the decimal point moves to the left according to the no. of zeros in 10, 100, 1000

Ex.: $145.72 \div 1000 = 0.14572$

- The decimal point has to move to the left 3 digits because we have 3 zeros, and if we don't have enough digits, we have to put a zero in the place of each digit.

Ex. $145.72 \div 100000 = 0.0014572$

Note:

- When we multiply (or divide) by 10, 100, ---- Count the zeros to find out how much bigger (or smaller) your number must be.
- Make sure you move the decimal point in the correct direction.

Ex.

$$51.09 \times 10 = 510.9$$

$$145.7 \div 100 = 1.457$$

because $145.71 = \frac{14572}{100}$

and $\frac{14572}{100} \div 100 = \frac{14572}{100} \times \frac{1}{100} = \frac{14572}{10000} = 1.4572$

Exercises

Remember

When we Divide we'll move to left

(1) Complete:

1) $64.43 \div 10 = \dots\dots\dots$

2) $49.21 \div 1000 = \dots\dots\dots$

3) $6.243 \div 100 = \dots\dots\dots$

4) $3.56 \div \dots\dots\dots = 0.356$

5) $31.42 \div \dots\dots\dots = 0.03142$

6) $\dots\dots\dots \div 1000 = 0.0073$

7) $45.256 \times \dots\dots\dots = 4525.6$

8) $0.051 \times \dots\dots\dots = 51$

9) $\dots\dots\dots \times 10 = 25.42$

10) $32.57 \div 10 = \dots\dots\dots$

11) $537.1 \div 10 = \dots\dots\dots$

12) $659.1 \div 1000 = \dots\dots\dots$

13) $25.3 \div \dots\dots\dots = 0.253$

14) $\dots\dots\dots \div 100 = 0.563$

15) $\dots\dots\dots \div 100 = 0.56$

16) $2.63 \times \dots\dots\dots = 2630$

17) $\dots\dots\dots \times 1000 = 25.1$

(2) Choose the correct answer from the parentheses:

- 1) $1.7 \div 10 = \dots\dots\dots$ (17 , 0.17 , 1.7 , 0.017)
- 2) $75.3 \div 100 = \dots\dots\dots$ (753 , 7.53 , 7530 , 0.753)
- 3) $8.76 \div 1000 = \dots\dots\dots$ (87.6 , 8.76 , 0.00876 , 8760)

(3) Put (< , > or =) in the empty spaces:

- | | | |
|-----------------------|----------------------|------------------|
| 1) $4.532 \div 10$ | <input type="text"/> | $45.32 \div 100$ |
| 2) $3721 \div 1000$ | <input type="text"/> | $3721 \div 100$ |
| 3) $27.65 \div 10$ | <input type="text"/> | $27.65 \div 10$ |
| 4) $4034 \div 100$ | <input type="text"/> | $34.2 \div 100$ |
| 5) $608.3 \div 1000$ | <input type="text"/> | $608.7 \div 10$ |
| 6) 4.162×100 | <input type="text"/> | $4162 \div 10$ |

Remember

To convert from big unit to small unit we make times

(4) Complete:

- | | |
|------------------------------|---------------------------------|
| 1) 3.002 kgm = gm | 5) 65.7 pounds = piasters |
| 2) L.E 728.9 =piasters | 6) 0.235 m = cm |
| 3) 37.3 dcm = cm | 7) 0.03 kg = gm |
| 4) 3.6 km = m | 8) 13.0592 kg = m |

Remember

To convert from small unit to big unit we make division

(5) Complete:

- | | |
|---|------------------------|
| 1) 3237 g = kg | 6) 54 kg = tons |
| 2) 325 m = km | 7) 649.2 gm = kg |
| 3) 35.4 m = cm | 8) 6.12 pt = L.E..... |
| 4) 743 mm =cm | 9) 646.2 gm = kg |
| 5) $734 \text{ cm}^3 = \dots\dots\dots$ L | 10) 825 m = Km |

Lesson 5

Multiplying fraction

➤ Notes:

- 1) When we multiply all the sides must be in a fractional form even the mixed – number change it into fraction.
- 2) Simplify all the fractions together if they are big numbers, then multiply the rest ((the numerators and the denominators)).

➤ Example:

$$a) \frac{1}{2} \times \frac{3}{5} = \frac{3}{10}$$

$$b) 4 \times \frac{2}{7} = \frac{8}{7} = 1\frac{1}{7} \text{ ((notice: } 4 = \frac{4}{1} \text{))}$$

$$c) \frac{2}{\cancel{7}_1} \times \frac{\cancel{14}^2}{3} = \frac{4}{3} = 1\frac{1}{3}$$

$$d) 6 \times 2\frac{1}{6} = \cancel{6} \times \frac{13}{\cancel{6}} = 13$$

$$c) \frac{\cancel{5}^1}{\cancel{18}_3} \times \frac{\cancel{6}}{\cancel{15}_3} \times \frac{\cancel{9}^3}{2} = \frac{3}{6} = \frac{1}{2}$$

Exercises

1) Multiply:-

a) $3 \times \frac{2}{5} =$

b) $21 \times \frac{5}{7} =$

c) $20 \times \frac{1}{4} =$

d) $\frac{3}{4} \times \frac{3}{4} \times \frac{8}{9} =$

e) $\frac{4}{5} \times \frac{10}{24} =$

f) $\frac{5}{3} \times \frac{13}{25} =$

g) $2\frac{1}{2} \times 1\frac{1}{3} =$

h) $5\frac{1}{3} \times \frac{9}{8} =$

i) $\frac{14}{27} \times \frac{9}{21} =$

j) $\frac{44}{9} \times \frac{3}{11} =$

k) $9\frac{3}{4} \times \frac{40}{9} =$

l) $\frac{3}{4} \times \frac{4}{3} =$

2) Find the result:

a) $\frac{1}{3} \times \frac{2}{5} =$

b) $\frac{5}{13} \times \frac{13}{25} =$

c) $\frac{2}{3} \times \frac{3}{25} =$

d) $\frac{5}{6} \times \frac{2}{7} \times \frac{21}{35} =$

e) $\frac{1}{3} \times \frac{1}{7} =$

f) $\frac{7}{18} \times \frac{9}{7} \times \frac{6}{15} =$

g) $\frac{3}{4} \times \frac{6}{7} =$

h) $1 \frac{5}{7} \times \frac{7}{15} =$

i) $\frac{3}{15} \times 25 =$

j) $\frac{1}{2} \times \frac{2}{3} \times \frac{6}{11} =$

k) $\frac{1}{2} \times \frac{7}{8} =$

l) $\frac{3}{4} \times \frac{3}{4} \times \frac{2}{9} =$

m) $\frac{7}{10} \times \frac{5}{7} =$

n) $7 \times \frac{1}{3} =$

Lesson 6

Dividing fractions

➤ Notes:

- 1) When we divide: the two sides must be in a fractional form such as the multiplication.
- 2) Put the first fraction as it is.
- 3) Change (\div) into (\times).
- 4) Change the second fraction into its reciprocal, then complete as the multiplication.

➤ Example:

$$1 \frac{2}{3} \div \frac{2}{9} = \frac{5}{3} \times \frac{9}{2} = \frac{15}{2} = 7 \frac{1}{2}$$

➤ Notice that:

The reciprocal of a fraction means to change the numerator and the denominator each in the place of the other.

➤ Example:-

$$\frac{2}{3} \text{ its reciprocal is } \frac{3}{2}, \quad \text{b) } 2 \frac{1}{5} \text{ its reciprocal is } \frac{5}{11}$$

Exercises

1) Write the reciprocal of each of the following:

a) $\frac{7}{9} = \dots$	b) $\frac{1}{11} = \dots$	c) $7 \frac{5}{8} = \dots$
d) $\frac{17}{6} = \dots$	e) $1 = \dots$	f) $6 \frac{3}{7} = \dots$
g) $\frac{2}{8} = \dots$	h) $\frac{12}{15} = \dots$	i) $1 \frac{1}{2} = \dots$

2) Divide:-

a) $12 \div \frac{5}{4} = \dots\dots\dots$

b) $\frac{10}{81} \div \frac{5}{9} = \dots\dots\dots$

c) $6 \div \frac{2}{3} = \dots\dots\dots$

d) $7 \div \frac{1}{4} = \dots\dots\dots$

e) $\frac{6}{21} \div \frac{3}{7} = \dots\dots\dots$

f) $\frac{35}{16} \div \frac{7}{8} = \dots\dots\dots$

g) $42 \div \frac{7}{6} = \dots\dots\dots$

h) $4 \frac{2}{3} \div \frac{2}{3} = \dots\dots\dots$

i) $7 \frac{1}{2} \div 3 \frac{1}{3} = \dots\dots\dots$

j) $10 \frac{1}{4} \div 2 \frac{15}{2} = \dots\dots\dots$

k) $4 \frac{2}{3} \div \frac{2}{3} = \dots\dots\dots$

h) $2 \frac{3}{4} \div \frac{11}{8} = \dots\dots\dots$

3) Find the result:-

a) $2 \div \frac{1}{3} = \dots\dots\dots$

b) $6 \div \frac{2}{3} = \dots\dots\dots$

c) $\frac{5}{7} \div \frac{2}{7} = \dots\dots\dots$

d) $\frac{7}{10} \div \frac{9}{10} = \dots\dots\dots$

e) $\frac{2}{3} \div \frac{1}{4} = \dots\dots\dots$

f) $\frac{6}{21} \div \frac{3}{7} = \dots\dots\dots$

g) $1\frac{1}{2} \div 3\frac{3}{4} = \dots\dots\dots$

h) $5\frac{1}{2} \div 3\frac{3}{4} = \dots\dots\dots$

i) $1 \div \frac{7}{8} = \dots\dots\dots$

j) $4\frac{2}{3} \div \frac{2}{3} = \dots\dots\dots$

k) $\frac{3}{4} \div \frac{9}{10} = \dots\dots\dots$

l) $\frac{1}{2} \div \frac{1}{12} = \dots\dots\dots$

m) $\frac{3}{8} \div \frac{3}{4} = \dots\dots\dots$

n) $\frac{3}{4} \div \frac{3}{4} = \dots\dots\dots$

4) Word Problems:-

1) Osama bought $\frac{3}{4}$ kg of butter for L.E. 8 per kilogram. How much money did he pay?

.....

2) The price of $3\frac{3}{4}$ kg of meat is $56\frac{5}{8}$ pounds. Find the price of each kg?

.....

3) A lion in the zoo eat $3\frac{1}{2}$ kg of meat each day, How many days does the lion need to eats 21 kg?

.....

4) A box contains 45 marbles, if $\frac{2}{5}$ of them are red, Find the number of red marbles?

.....

.....

5) Mona saved L.E. $17\frac{1}{2}$ in 7 days. How much did she save in each day?

.....

.....

Lesson 7

Multiplying decimals

➤ **First:** Multiplying a decimal by a whole number

EX.:

$$0.132 \times 32$$

- Ignore the decimal point.
- Multiply $132 \times 32 = 4224$
- Count the digits to the right of the decimal point. (3digit).
- Put the decimal point after 3 digits from the right in the result.

132
$\times 32$
264
$+ 3960$
4224

$$\therefore 0.132 \times 32 = 4.224$$

HOW COMES??

$$0.132 = \frac{132}{1000}$$

$$\therefore 0.132 \times 32$$

$$\frac{132}{1000} \times 32 = \frac{4224}{1000} = 4.224$$

Exercises

Keep The
Zero in Tens

1) Find the result:

a) $546 \times 0.1 = \dots\dots\dots$

b) $2345 \times 0.001 = \dots\dots\dots$

c) $208 \times 0.003 = \dots\dots\dots$

d) $295 \times 0.4 = \dots\dots\dots$

e) $17.49 \times 4 = \dots\dots\dots$

f) $6148.2 \times 7 = \dots\dots\dots$

g) $8.12 \times 10 = \dots\dots\dots$

h) $495.013 \times 100 = \dots\dots\dots$

i) $0.251 \times 9 = \dots\dots\dots$

j) $2.51 \times 9 = \dots\dots\dots$

Solution:

--	--

2) Find:**Keep The
Zero in Tens**

a.

$$\begin{array}{r} 0.215 \\ \times \quad 9 \\ \hline \end{array}$$

.....

b.

$$\begin{array}{r} 13.25 \\ \times \quad 28 \\ \hline \end{array}$$

.....

c.

$$\begin{array}{r} 3154 \\ \times 0.01 \\ \hline \end{array}$$

.....

d.

$$\begin{array}{r} 512 \\ \times 1.35 \\ \hline \end{array}$$

.....

e.

$$\begin{array}{r} 550 \\ \times 1.48 \\ \hline \end{array}$$

.....

f.

$$\begin{array}{r} 708 \\ \times 4.33 \\ \hline \end{array}$$

.....

g.

$$\begin{array}{r} 32.6 \\ \times \quad 7 \\ \hline \end{array}$$

.....

h.

$$\begin{array}{r} 0.0326 \\ \times \quad 7 \\ \hline \end{array}$$

.....

i.

$$\begin{array}{r} 37 \\ \times 5.2 \\ \hline \end{array}$$

.....

➤ **Second:** Multiplying a decimal by another:

EX.:

$$41.5 \times 2.34$$

$$\begin{array}{r} 415 \\ \times 234 \\ \hline 1660 \\ 12450 \\ 83000 \\ \hline 97110 \end{array}$$

- Ignore the decimal point.
- Multiply $415 \times 234 = 97110$
- Count the digits to the right of the decimal points in both numbers and add them.
 $1 + 2 = 3$ digits
- Put the decimal point after 3 digits from the right in the result.

$$\therefore 41.5 \times 2.34 = 97.110$$

HOW COMES??

$$41.5 = \frac{415}{10}, \quad 2.34 = \frac{234}{100}$$

$$\therefore \frac{415}{10} \times \frac{234}{100} = \frac{97110}{1000} = 97.110$$

You can check:

41.5 → the point after 1 digit

2.34 → the point after 2 digits

$$\text{Then } 1 + 2 = 3$$

So in the answer the point after 3 digits

Exercises

1) Find:

- a) $6.42 \times 0.57 = \dots\dots\dots$
- b) $19.32 \times 1.22 = \dots\dots\dots$
- c) $1.154 \times 0.9 = \dots\dots\dots$
- d) $203.9 \times 0.32 = \dots\dots\dots$

Solution:

--	--

2) Find:

a) $(5.7 \times 3.2) - 6.24 = \dots\dots\dots$

b) $(0.3 + 0.4) \times 0.7 = \dots\dots\dots$

c) $(1.345 - 0.59) \times 3.14 = \dots\dots\dots$

d) $13.84 \times (64 - 59.74) = \dots\dots\dots$

Solution:

--	--

3) Compare the products of the following by putting $<$, $>$, $=$:

- a) 7.3×0.28 0.73×2.8
- b) 0.342×1.28 3.42×0.12
- c) 172×0.003 0.172×0.3
- d) 12.35×2.5 12.35×0.25
- e) 48.2×3.7 4.82×37
- f) 4.2×1.53 4.2×15.3
- g) 0.206×1.6 $2.06 \times 0.3 \times 0.5$

Solution:

--	--

4) Estimate the products of the following operations then compare your estimation of the actual result:

a) 5.3×2.7

actual result

estimated result

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) 18.8×7.1

actual result

estimated result

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

c) 7.82×4.3

actual result

estimated result

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

d) 5.89×6.1

actual result

estimated result

e) 28.7×3.1

actual result

estimated result

f) 3.9×0.704

actual result

estimated result

Lesson 8

Dividing by 2 and 3- digit number

1) Finite and infinite division (and the quotient is a whole number):-

Ex: a) $56 \div 7 = 8$

b) $322 \div 23 = 14$

$$\begin{array}{r} 14 \\ 23 \overline{) 322} \\ \underline{- 23} \\ 92 \\ \underline{- 92} \\ 00 \end{array}$$

r = 00

So: dividend = quotient x divisor

$\therefore 322 = 14 \times 23$

2) Infinite division : which is with reminder:

Ex :- $340 \div 13 = 26$ and $r = 2$

$$\begin{array}{r} 26 \\ 13 \overline{) 340} \\ \underline{- 26} \\ 80 \\ \underline{- 78} \\ 2 \end{array}$$

r = 2

So: dividend = (quotient x divisor) + remainder

$340 = (26 \times 13) + 2$

$\therefore 340 = 338 + 2$

Exercises

1) Find the quotient of the following:

a) $11664 \div 216 = \dots\dots\dots$

b) $19708 \div 379 = \dots\dots\dots$

c) $37440 \div 234 = \dots\dots\dots$

d) $15345 \div 165 = \dots\dots\dots$

e) $62160 \div 296 = \dots\dots\dots$

f) $11183 \div 211 = \dots\dots\dots$

g) $121402 \div 202 = \dots\dots\dots$

h) $33748 \div 143 = \dots\dots\dots$

Solution:

--	--

Dividing decimals

➤ First: Dividing a decimal by a whole number:

When we divide decimal by a whole number we do the division operation as usual and put the decimal point in its order in the quotient.

Example:-

$$10.4 \div 4 = 2.6$$

$$\begin{array}{r} 2.6 \\ 4 \overline{) 10.4} \\ \underline{8} \\ 24 \\ \underline{24} \\ 00 \end{array}$$

Exercises

1) Find:

- a) $4.8 \div 4 = \dots\dots\dots$
 b) $9.8 \div 7 = \dots\dots\dots$
 c) $20.4 \div 3 = \dots\dots\dots$
 d) $1177.2 \div 36 = \dots\dots\dots$

2) Using that $2896 \div 362$ deduce the following results:

- a) $28.96 \div 8 = \dots\dots\dots$
 b) $289.6 \div 8 = \dots\dots\dots$
 c) $2.896 \div 8 = \dots\dots\dots$
 d) $28960 \div 8 = \dots\dots\dots$

➤ **Second: Dividing by decimal or numeral decimal:-**

To divide by a decimal or numeral decimal we should change it into a whole number by multiplying the two terms of the division by 10, 100, 1000

According to the place of the decimal point in the divisor then do the division operation as usual.

Example:

$$75.826 \div 6.2 \text{ (1place) } \dots \times 10$$

$$758.26 \div 62 = 12.23$$

You can check

6.2 the decimal point after

75.826 the decimal point after

$$\text{Then } 3 - 1 = 2$$

So in the quotient the decimal point after 2

$$\begin{array}{r}
 012.23 \\
 62 \overline{) 758.26} \\
 \underline{- 62} \\
 138 \\
 \underline{- 124} \\
 142 \\
 \underline{- 124} \\
 186 \\
 \underline{- 186} \\
 000
 \end{array}$$

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3) Find :

- a) $31926 \div 225$ to the nearest tenth.
b) $43932 \div 456$ to the nearest hundredth.
c) $167752 \div 456$ to the nearest unit.
d) $10773 \div 66$ to the nearest $\frac{1}{1000}$

Solution:

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Exercises

1) Find the quotient of the following:

- | | |
|--|---|
| a) $0.416 \div 0.8 = \dots\dots\dots$ | b) $0.0874 \div 0.46 = \dots\dots\dots$ |
| c) $1.155 \div 0.35 = \dots\dots\dots$ | d) $36.18 \div 0.09 = \dots\dots\dots$ |
| e) $357 \div 0.7 = \dots\dots\dots$ | f) $0.7595 \div 0.31 = \dots\dots\dots$ |

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Solution:

--	--

2) Find the quotient of the following:

- | | |
|---------------------------------------|--|
| a) $98.4 \div 8.2 = \dots\dots\dots$ | b) $4.794 \div 1.7 = \dots\dots\dots$ |
| c) $18.45 \div 4.5 = \dots\dots\dots$ | d) $185.6 \div 12.8 = \dots\dots\dots$ |
| e) $2.16 \div 7.2 = \dots\dots\dots$ | f) $4.2 \div 0.06 = \dots\dots\dots$ |
| g) $4.6 \div 1.25 = \dots\dots\dots$ | h) $8.96 \div 3.2 = \dots\dots\dots$ |

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Solution:

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3) Find the quotient of the following:

a) $(92.36 - 63.25) \div 0.41$

b) $(19.645 - 4.73) \div 0.38$

c) $(42.566 - 25.36) \div 0.7$

d) $(50.84 - 6.2) + 18.2$

Solution:

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4) Find number:

- a) When multiplied by 0.64 then the result is 075.52
- b) If divided by 249 the quotient is 12

Solution:

.....

.....

.....

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5) Which of the following relation is true and which is false? What do you conclude.

a) $3.6 \times 1.3 = 1.3 = 3.6$

b) $0.8 \div 0.04 = 0.04 \div 0.8$

Solution:

6) Find the quotient of the following:

a) $2.67 \div 1.7 = \dots\dots\dots$

b) $0.171 \div 1.9 = \dots\dots\dots$

c) $65.7 \div 6.57 = \dots\dots\dots$

d) $7.452 \div 621 = \dots\dots\dots$

e) $38.64 \div 8.4 = \dots\dots\dots$

f) $21.528 \div 93.6 = \dots\dots\dots$

Solution:

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7) Find the quotient of the following:

a) $(25.42 - 3.1) + 1.8$

b) $3.62 - (55.25 \div 32.5)$

c) $94.5 \div 3.5$

d) $2.64 \div 0.2$

e) $(5.3 \times 11.2) \div 2.1$

f) $(20.9 \div 7.1) \times 5.2$

Solution:

The infinite division

- Write $\frac{5}{6}$ in a decimal form to the nearest tenth.

Sol:

- The steps:

1- Make a usual division

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But you can't divide $5 \div 6$

So you put decimal point

$$\begin{array}{r} 6 \overline{) 5.00} \end{array}$$

Then he need nearest tenth

So you put 2 zero

Then make a usual division

$$\begin{array}{r} 0.83 \\ 6 \overline{) 5.00} \\ \underline{4.8} \\ 020 \\ \underline{18} \\ 02 \end{array}$$

Then $5.6 = 0.83 \approx 0.8$

Not

IF NEED NEAREST TENTH SO YOU PUT 2 ZERO

If need nearest Hundredth So you put 3 zero

If need nearest Thousandth So you put 4 zero

➤ Convert the following to the decimal form:

a) $\frac{3}{4}$

b) $\frac{1}{8}$

c) $\frac{7}{40}$

d) $\frac{4}{25}$

e) $\frac{7}{3} \approx \dots\dots\dots$ To the nearest $\frac{1}{10}$

f) $\frac{3}{11} \approx \dots\dots\dots$ To the nearest $\frac{1}{100}$

g) $\frac{5}{9} \approx \dots\dots\dots$ To the nearest $\frac{1}{100}$

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h) ----- To the nearest

General Exercises

i) $\frac{2}{3} \approx \dots\dots\dots$ To the nearest $\frac{1}{100}$

Solution:

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RememberIf the two number **Far** make \div If the two number near change the sign $\div \rightarrow \times$ $\times \rightarrow \div$ **1) Complete:**

a) $4.25 \div \dots\dots\dots = 8 \frac{1}{2}$

b) $\dots\dots\dots \div 9 = 4.5$

c) $0.006 \div \dots\dots\dots = 0.3$

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d) $\div 12.5 = 25.1$

e) $\times 6.4 = 205.696$

f) $31.78 \times \dots = 3.5$

Solution:

--	--

2) Find the quotient of the following:

a) $9.568 \div 9 \frac{1}{5} = \dots$

b) $2 \frac{1}{8} \div 0.125 = \dots$

c) $2 \frac{3}{25} \div 0.012 = \dots$

d) $\frac{17}{40} \div 0.85 = \dots$

Solution:

--	--

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3) Find the result and approximate them to the nearest hundredth:

a) $7.034 \div 1.7 = \dots\dots\dots$ b) $1.775 \times 0.15 = \dots\dots\dots$

c) $(3.425 + 1.07) \div 2.8 = \dots\dots\dots$ d) $7.52 \div (14.73 - 11.58) = \dots\dots\dots$

Solution:

--	--

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4) Find the result and approximate them to the nearest hundredth:

- a) $53.27 \div 2.1 = \dots\dots\dots$ b) $24.31 \div 9.07 = \dots\dots\dots$
c) $1.623 \div 0.152 = \dots\dots\dots$ d) $12.46 \div 0.517 = \dots\dots\dots$

Solution:

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5) Which is greater $\frac{9}{16}$ or 0.5734?

Find the difference between the two fractions:

Solution:

.....
.....
.....

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6) Find a number that if multiplied by 0.37 then the result is 17.8932

Solution:

7) Find the quotient of $458.62 \div 35.2$ to the nearest hundredth.

Solution:

8) Divide 375 by 0.5 then add $5\frac{1}{4}$ to the quotient.

Solution:

9) The area of a rectangle is 10.25 square meter and its length is 4.1 meters. Find its width and perimeter.

10) The side length of a square is 5.06 meter. Find its area approximating it to the nearest hundredth.

11) The length of a rectangle is 25.4 cm while its width is 18.09 cm. Find its perimeter and its area.

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Solution:

The story problems

- 1) The price of a bar of chocolate is L.E. 2.75.

What is the cost of 15 bars of the same kind?

- 2) Ahmed bought 12 cans of juice. The price of each can was L.E. 1.75

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- What is the total cost of the juice? How much would the seller pay back to Ahmed if he paid him L.E. 30?

- 3) Salwa bought a piece of cloth with 3.75m in length. If the price of one meter was L.E. 33.75

Find the cost of cloth approximating it to the nearest pound.

- 4) If the price of one meter of cloth is L.E 6.45.

What is the cost of 2.4 meter of cloth?

- 5) A bundle of paper has a height of 4.5 cm. if all its papers were of equal thickness. Where the thickness of each paper was 0.090 millimeters, Find how many papers does the bundle include?

- 6) The result of multiplying 2 numbers is 9088.

If one of them is 284, find the other number.

- 7) An owner of packing food factories wanted to pack 5904 kilograms of sugar equally in 492 packs. What is the weight of each pack?

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8) A car covers equal distances in equal times.

How many kilometers does it cover in 2 hours and 15 minutes if its speed is 73.25 kilometers per hour?

9) A truck can hold 125 boxes of oranges at a time.

How many times are needed to deliver 4375 boxes by that truck?

10) The length of a roll of cloth is 53.55 meters. It was divided into equal parts where the length of each part is 3.15 meters.

Find the number of these parts.