

P.5 MATHEMATICS

LESSON ONE WEEK EIGHT

Theme: Numeracy

Topic: Fractions (decimals)

Places values of digits in decimals

Examples

Write the place value of each digit in;

1. 0.456

0		Tths	Hths	Tths
0	.	4	5	6

ones
and
Tenths
Hundredths
Thousands

2. 53.098

T	O		Tths	Hths	Tths
5	3	.	0	9	8

Tens
Ones
and
Tenths
Hundredths
Thousandths

3. Write the place value of the underlined digit in 3.75

0		Tths	Hths
3	•	7	<u>5</u>

|
Hundredths

Exercise

1. Write the place value of each digit in each of the following.

- a) 0.9
- b) 247.8
- c) 0.123
- d) 69.04
- e) 4.5

2. Write the place value of 2 in each of the following.

- a) 0.429
- b) 7.295
- c) 26.004
- d) 43.072
- e) 209.999

LESSON 2

Finding values of each digit in decimals

When finding values we multiply the digit by its place value

Examples

Ones		Tths	Hths	Thths
0	•	4	7	8

|
0x1=0

and

4 x $\frac{1}{10}$ = 0.4

7 x $\frac{1}{100}$ = 0.07

8 x $\frac{1}{1000}$ = 0.008

2. Find the value of each digit in 69.758

T	O		Tths	Hths	Thths
6	9	•	7	5	8

$6 \times 10 = 60$
 $9 \times 1 = 9$
 and
 $7 \times \frac{1}{10} = 0.7$
 $5 \times \frac{1}{100} = 0.05$
 $8 \times \frac{1}{1000} = 0.008$

Exercise

1. Find the value of each digit in each of the following.

- 0.45
- 0.127
- 4.8
- 75.9
- 89.134

2. Find the value of each of the underlined digits

- 0.23
- 2.008
- 48.358
- 657.9
- 85.789

LESSON 3

Writing decimal number in words

Examples

1. Write 0.5 in words

$$0.5 = \frac{5}{10}$$

= **five tenths** or **zero point five**

2. Write 0.27 in words

$$0.27 = \frac{27}{100}$$

= **Twenty seven hundredths.** Or **zero point two seven**

3. Write 6.362 in words

$$6.362 = 6 \text{ and } 362$$

= **six and three hundred sixty two thousandths** or **six point three six two**

Exercise

Write the following decimal fractions in words

- | | |
|----------|-----------|
| a) 0.3 | f) 7.405 |
| b) 12.9 | g) 5.01 |
| c) 0.48 | h) 84.13 |
| d) 0.895 | i) 46.009 |
| e) 3.2 | j) 627.4 |

LESSON 4

Writing decimal fractions in figures

Examples

- Three tenths
 $\frac{3}{10} = 0.3$
- Two and forty five hundredths
 $2 \text{ and } \frac{45}{100} = 2 \frac{45}{100} = 2.45$
- Sixty nine and nine tenths
 $69 \text{ and } \frac{9}{10} = 69 \frac{9}{10} = 69.9$

Write the following in figures

- | | |
|--|--|
| 1. Six and five tenths | 7. Two hundred twenty one and six tenths |
| 2. Two and thirty eight hundredths | 8. Nine thousand, two hundred seven and fifty six hundredths |
| 3. Ninety seven hundredths | 9. Five hundred twenty four and nine hundred ninety one thousandth |
| 4. Ninety two thousandths | 10. Two thousand twelve and eight tenths |
| 5. Forty two and eight hundredths. | |
| 6. One hundred twenty one and six tenths | |

LESSON 5

Expanding decimals using values and powers of ten

Examples

- Expand 0.658 using values

0		Tths	Hths	Thths
0	●	6	5	8

$$\begin{array}{l} 8 \times \frac{1}{100} = \frac{8}{1000} = 0.008 \\ 5 \times \frac{1}{100} = \frac{5}{100} = 0.05 \\ 6 \times \frac{1}{10} = \frac{6}{10} = 0.6 \\ 0 \times 1 = 0 \end{array}$$

$$\underline{\underline{0.6 + 0.05 + 0.008}}$$

2. Expand 45.732 using values

T	0		Tths	Hths	Thths
4	5	•	7	3	2

$$4 \times 10 = 40$$

$$5 \times 1 = 5$$

$$7 \times \frac{1}{10} = \frac{7}{10} = 0.7$$

$$3 \times \frac{1}{100} = \frac{3}{100} = 0.03$$

$$2 \times \frac{1}{1000} = \frac{2}{1000} = 0.002$$

40 + 5 + 0.7 + 0.03 + 0.002

3. Expand 6.789 using powers

10^0		10^{-1}	10^{-2}	10^{-3}
6	•	7	8	9

$$(6 \times 10^0) + (7 \times 10^{-1}) + (8 \times 10^{-2}) + (9 \times 10^{-3})$$

Note:

Tenth – $\frac{1}{10} = 0.1 = 10^{-1}$ Hundredths $\frac{1}{100} = 0.01 = 10^{-2}$ etc

Exercise

Expand the following as instructed in brackets

1. 4.06 (using values)
2. 8.25 (using powers)
3. 13.984 (using values)
4. 68.9 (using exponents)
5. 843.125 (giving values)
6. 99.003 (using values)
8. 375 (giving values)
9. 0.489 (using powers)
10. 9,358.7 (giving values)
11. 11.678 (using powers)
12. 7,853.874 (giving values)