

Mathematics Note for Grade 5

Multiplication Decimal by Decimal

We have two steps to multiply decimal by decimal

1. We omit the decimal points in the two numbers and multiply the two whole numbers as we ordinarily do.
2. In the product we mark the decimal point after as we many digits as the sum of the numbers of digits in the decimal part of the given numbers starting from the right end.

Example: $12.24 \times 3.16 = 38.6784$

$1224 \times 316 = 386784$. There are 2 digits in the decimal part of 12.24 and two digits in the decimal part of 3.16 the total being 4. Then we mark the decimal point after four digits from the right. Therefore $12.24 \times 3.16 = 38.6784$.

Division by powers of ten

When we divide a decimal by any powers of 10, the quotient is obtained by shifting the decimal point to the left by as many places as there are zeros in the divisor.

Example: A. $23.345 \div 10 = 2.3345$

B. $9545.41 \div 100 = 95.4541$

Division of a decimal by a natural number

Example : A. $4.2 \div 4$

$$\frac{42}{10} \div 4$$

$$\frac{42}{10} \times \frac{1}{4} = \frac{42}{400} = 1.05$$

$$\text{B. } 0.375 \div 25 = \frac{375}{1000} \div 25$$

$$= \frac{375}{1000} \div \frac{1}{25} = \frac{375}{25 \times 1000} = 0.015$$

Division by a Decimal

Example : $3.568 \div 1.6 = \frac{3.568}{1.6}$ (multiply by $\frac{1000}{1000}$)

$$\therefore \frac{3.568 \times 1000}{1.6 \times 1000} = \frac{3568}{1600}$$

$$\therefore 2.23$$

Rounding decimals

The rule is the same as the one we use for natural number.

Example: A. 5.2567 to the nearest hundredths. The place to the right side of the hundredths digit is thousandths so if the thousandths digit is ≥ 5 we add 1 on hundredths digit and replace the other digits to the right of it by 0.

Therefore in 5.2567, $6 > 5$

5.2567 is rounded to 5.26 to the nearest hundredths.

Do **Activity 5.8** **on** **page** **86**

Unit six

Average

Definition:- Average is a number that is calculated by adding quantities together and dividing the total by the number of quantities.

$$\text{Average} = \frac{\text{Total } \Sigma \text{ of item}}{\text{number of items}}$$

Example:- find the average of 10, 12, 35, and 23

$$\text{Average} = \frac{10+12+35+23}{4} = \frac{80}{4} = 20$$

Do Activity 6.1 on

Properties of average

I. Adding the same number on each item

If we add the same number on the numbers then the new average will be the old average plus the added number.

Example: - take 1, 2, 3, 4 and 5

The average is $\frac{1+2+3+4+5}{5} = \frac{15}{5} = 3$

Now add 5 on each number that is

$$1+5, 2+5, 3+5, 4+5 \wedge 5+5$$

=6, 7, 8, 9 and 10

Now find the average of these new numbers

$$\frac{6+7+8+9+10}{5} = \frac{40}{5} = 8$$

Look our old average is 3 but our new average is 8 that means our old average is increased by 5.

II. Subtracting the same number from each numbers

If we subtract the same number from the given numbers then the new average will be the old average minus the subtracted number.

Example: - take 2, 3, 4, 5 and 6

$$\text{Average} = \frac{2+3+4+5+6}{5} = \frac{20}{5} = 4$$

Now subtract 1 on each numbers that is

$$2-1, 3-1, 4-1, 5-1, \wedge 6-1 = 1, 2, 3, 4 \text{ and } 5$$

Now find the average of these new numbers

$$\frac{1+2+3+4+5}{5} = \frac{15}{5} = 3$$

Look the old average 4 is decreased by 1.

Do
Activity
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6.2 on
page
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