

CHAPTER 3

DECIMALS

1. Find the value of $29.94 \div 1.45$, if $2994 \div 14.5 = 172$.

Solution:

Given that, $2994 \div 14.5 = 172$

$29.94/1.45$ can be written as $299.4/14.5$

Again, $299.4 / 14.5$ is written in the form as follows:

$$= [(2994/14.5) \times (1/10)]$$

Now, substitute $2994 \div 14.5 = 172$

$$= 172 \times (1/10)$$

$$= 17.2$$

Hence, the value of $29.94 \div 1.45$ is 17.2.

2. Simply the value $[489.1375 \times 0.0483 \times 1.956]/[0.0873 \times 92.581 \times 99.749]$, and then find the value closest to it.

Solution:

Given expression: $[489.1375 \times 0.0483 \times 1.956]/[0.0873 \times 92.581 \times 99.749]$

Now, write the given values rounded to its nearest value.

Hence, the given value is approximately equal to $[489 \times 0.05 \times 2]/[0.09 \times 93 \times 100]$

$$= 489/(9 \times 93 \times 10)$$

$$= (163/279) \times (1/10)$$

$$= 0.58/10 = 0.058, \text{ which is approximately equal to } 0.06.$$

Hence, the value closest to the expression $[489.1375 \times 0.0483 \times 1.956]/[0.0873 \times 92.581 \times 99.749]$ is 0.06.

3. $11.98 \times 11.98 + 11.98 \times x + 0.02 \times 0.02$ should be a perfect square for “m” equal to:

Solution:

Given expression: $(11.98 \times 11.98 + 11.98 \times m + 0.02 \times 0.02)$

$$11.98 \times 11.98 + 11.98 \times m + 0.02 \times 0.02 = (11.98)^2 + (0.02)^2 + 11.98 \times m.$$

For the expression to be a perfect square, we should have,

$$11.98 \times m = 2 \times 11.98 \times 0.02$$

$$11.98 \times m = 0.4792$$

$$\text{Hence, } m = 0.4792/11.98$$

$$m = 0.04$$

Thus, $11.98 \times 11.98 + 11.98 \times m + 0.02 \times 0.02$ should be a [perfect square](#) for “m” equal to 0.04.

4. Find the unknown value in the given equation: $3889 + 12.952 - ? = 3854.002$

Solution:

Let the unknown value be a.

$$\text{Thus, } 3889 + 12.952 - a = 3854.002.$$

Rearranging the above equation, we can write

$$a = (3889 + 12.952) - 3854.002$$

$$a = 3901.952 - 3854.002$$

$$a = 47.95.$$

Thus, the unknown value is 47.95.

5. Convert the given fractions into decimals and arrange them in ascending order: $1/4$, $1/7$, $3/4$, $6/2$, $1/2$.

Solution:

First convert the fractions into decimals.

$$1/4 = 0.25$$

$$1/7 = 0.143$$

$$3/4 = 0.75$$

$$6/2 = 3$$

$$1/2 = 0.5$$

Now, arrange the decimal values in the [ascending order](#):

0.143, 0.25, 0.5, 0.75, 3.

6. Find the quotient if 4.036 is divided by 0.04.

Solution:

Given fraction: $4.036/0.04$

Now, multiply the fraction's numerator and denominator by 100.

$$4.036/0.04 = 403.6/4 = 100.9.$$

Thus, 4.036 divided by 0.04 gives 100.9.

7. What is the equivalent of 0.002×0.5 ?

Solution:

Given expression: 0.002×0.5

On simplifying the expression 0.002×0.5 , we get;

$$0.002 \times 0.5 = 0.001.$$

8. Write the decimal number for “Fifty Seven and Twenty Three One-Hundredths”.

Solution:

Fifty-Seven and Twenty Three One-Hundredths is written in the form $57 + (23/100)$

Now, simply the above value,

$$= 57 + 0.23$$

$$= 57.23.$$

Hence, Fifty Seven and Twenty Three One-Hundredths in decimal form is 57.23.

9. Jack biked 1.2 miles. Then he ran 0.75 mile. How far did Jack go?

Solution:

Given: Distance travelled by jack = $1.2 + 0.75 = 1.95$.

Hence, the total distance travelled by Jack = 1.95 miles.

10. Convert the fraction 43/100 into decimal form.

Solution:

To convert the fraction into a decimal, divide the fraction's numerator by the denominator,

$$43/100 = 0.43$$

Hence, the fraction 43/100 is written in decimal form as 0.43.