MULTIPLYING DECIMALS BY 10, 100, 1000,...

Multiplying by 10

To multiply a decimal by 10, move the decimal point one place to the right.

$1.42 \times 10 = 14.2 = 14.2$

Multiplying by 100

To multiply a decimal by 100, move the decimal point two places to the right.

$1.42 \times 100 = 142.0 = 142$

$3.5 \times 100 = 350.0 = 350$

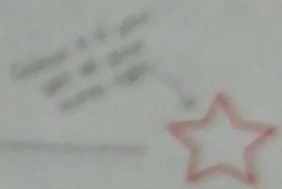Write as many zeros in when the correct number of decimal places.

Multiplying by 1000

To multiply a decimal by 1000, move the decimal point three places to the right.

$0.125 \times 1000 = 125.0 = 125$

$1.7 \times 1000 = 1700.0 = 1700$

Write two extra zeros to show the correct number of decimal places.

EXERCISE 5.13

A. Write the product.

1. $1.63 \times 10 = \underline{16.3}$ 2. $7.638 \times 100 = \underline{763.8}$ 3. $5.942 \times 1000 = \underline{5942}$

4. $317.5 \times 10 = \underline{3175}$ 5. $54.75 \times 100 = \underline{5475}$ 6. $2.94 \times 1000 = \underline{2940}$

7. $0.045 \times 10 = \underline{0.45}$ 8. $0.08 \times 100 = \underline{8}$ 9. $1.4 \times 1000 = \underline{1400}$

B. Fill in the blanks.

1. $12.1 \times \underline{10} = 121$ 2. $0.09 \times \underline{100} = 9$ 3. $1.75 \times \underline{1000} = 1750$

DIVIDING DECIMALS BY 10, 100, 1000,...

Dividing by 10

To divide a decimal by 10, move the decimal point one place to the left.

$64.5 \div 10 = 6.45$

Dividing by 100

To divide a decimal by 100, move the decimal point two places to the left.

$64.5 \div 100 = 0.645 = 0.645$

$7 \div 100 = 0.07$

Write an extra zero to show the correct number of decimal places

Dividing by 1000

To divide a decimal by 1000, move the decimal point three places to the left.

$64.5 \div 1000 = 0.0645 = 0.0645$

EXERCISE 5.14

A. Write the quotient.

1. $5.5 \div 10 = \underline{0.55}$
2. $14.9 \div 100 = \underline{0.149}$
3. $173 \div 1000 = \underline{0.173}$
4. $0.04 \div 10 = \underline{0.004}$
5. $0.9 \div 100 = \underline{0.009}$
6. $0.9 \div 1000 = \underline{0.0009}$
7. $1.25 \div 10 = \underline{0.125}$
8. $16.5 \div 100 = \underline{0.165}$
9. $16.3 \div 100 = \underline{0.163}$

B. Fill in the blanks.

1. $0.82 \div \underline{10} = 0.082$
2. $3.7 \div \underline{100} = 0.037$
3. $6.6 \div \underline{1000} = 0.0066$

TO MEET

Bhaskara II (AD 1114–1185) or Bhaskaracharya was a great Indian mathematician. He was born in Bijapur, Karnataka. He was the first to explain the complete and systematic use of the decimal number system.

POINTS TO REMEMBER

- Decimals are the numbers between the whole numbers.
- The decimal part after the decimal point is always less than 1 whole.
- Decimals are special fractions with denominators 10, 100 and 1000.
- On multiplying a decimal by 10, 100 and 1000, the decimal point moves to the right by one place, two places and three places respectively.
- On dividing a decimal by 10, 100 and 1000, the decimal point moves to the left by one place, two places and three places respectively.