

Divide with Decimals

Mazen has saved 0.45 Aed each day. He now has a total of 10.80 Aed. How long has Mazen been saving?

To solve, you need to divide 10.80 Aed by 0.45.

STEP 1: Make the divisor a whole number by multiplying the divisor and dividend by a multiple of 10.

$$\begin{array}{r} 0.45 \overline{)10.80} \\ \times 100 \quad \times 100 \end{array} \qquad \begin{array}{r} 45 \overline{)1080} \end{array}$$

STEP 2: Place the decimal point in the quotient directly above the decimal point in the Dividend.

Divide as you would with whole numbers.

$$\begin{array}{r} 24 \\ 45 \overline{)1080} \\ \underline{-90} \\ 180 \\ \underline{-180} \\ 0 \end{array}$$

Since the remainder is 0, the answer is a whole number. You do not need to show the decimal point. Mazen has been saving for 24 days.

Examples:

A- Rewrite the problem so that the divisor is a whole number.

1)

$$\begin{array}{r} 8 \\ 2.1 \overline{)16.8} \rightarrow 21 \overline{)168} \\ \underline{-168} \\ 0 \end{array}$$

2)

$$\begin{array}{r} 17 \\ 0.8 \overline{)13.6} \rightarrow 8 \overline{)136} \\ \underline{-8} \\ 56 \\ \underline{-56} \\ 0 \end{array}$$

B- Find the quotient.

3) $2.4 \div 0.4$
 $\underline{\quad 9 \quad}$

4) $0.63 \div 0.7$
 $\underline{\quad 0.9 \quad}$

5) $0.72 \div 0.8$
 $\underline{\quad 0.9 \quad}$