RATES

Rates compare quantities measured in different units.

The two different units are separated by a slash "/"

Example: 20 km/hr ("20 kilometres per hour")

Rates are generally written in their simplest form.

The average rate is calculated by dividing the total change in one quantity by the total change in the second.

Example: reading a 400-page book in 4 days

The average reading rate is 100 pages per day

Example 12 Writing simplified rates

Express each of the following as a simplified rate.

a 12 students for two teachers

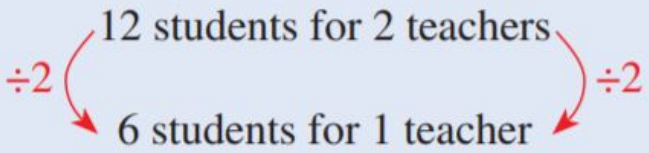
b $28 for 4 kilograms

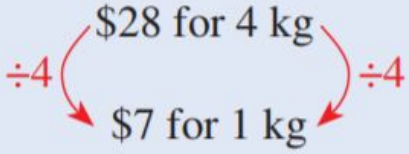
SOLUTION

a 6 students/teacher

b $7/kg

EXPLANATION

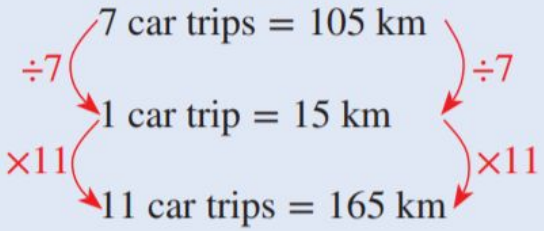




Example 14 Reviewing the unitary method

Andrea travels 105 km in seven identical car trips from home to school. How far would she travel in 11 such car trips?

SOLUTION



Andrea travels 165 km.

EXPLANATION

Find the value of 1 unit by dividing both quantities by 7.

Solve the problem by multiplying both quantities by 11.