

# Multiply 4-digit numbers by 2-digit numbers

Multiplication means repeated addition.

$1\,547 \times 26$	$= \square \approx 1\,500 \times 30 \approx 45\,000$	
$1\,547 \times 20$	$= 1\,547 \times 10 \times 2 = 15\,470 \times 2 = 30\,940$	$1\,547 \times 26$
$1\,547 \times 6$	$= (1\,000 \times 6) + (500 \times 6) + (40 \times 6) + (7 \times 6)$	$1\,547 \times 20 = 30\,940$
	$= 6\,000 + 3\,000 + 240 + 42$	$1\,547 \times 6 = \underline{9\,282}$
	$= \underline{9\,282}$	$\underline{40\,222}$
$30\,940 + 9\,282 = 40\,222$		

1 Complete the questions that follow using the above method. Remember to estimate the answers first, and to check your final answers using a calculator.

a  $1\,628 \times 72$

b  $5\,043 \times 71$

c  $8\,008 \times 41$

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## Multiply by splitting numbers into factors

$2\,318 \times 63$	$20\,862 \times 7$
$2\,318 \times 9 \times 7$	$= (20\,000 + 800 + 60 + 2) \times 7$
$= 2\,318 \times 3 \times 3 \times 7$	$= (20\,000 \times 7) + (800 \times 7) + (60 \times 7) + (2 \times 7)$
$= (2\,318 \times 3) \times 3 \times 7$	$= 140\,000 + 5\,600 + 420 + 14$
$= (6\,954 \times 3) \times 7$	$= 146\,034$
$= 20\,862 \times 7$	

2 Write the factors.

a 16: \_\_\_\_\_

b 27: \_\_\_\_\_

c 45: \_\_\_\_\_

d 18: \_\_\_\_\_

3 Write the HCF of:

a 16 and 18 \_\_\_\_\_

b 27 and 45 \_\_\_\_\_

A factor is a number that divides into another number without leaving a remainder, e.g. factors of 63 are 7, 9, 1 and 63. We used 9 and 7 to do this calculation.

# More multiplication

- 1 Estimate, then use the method on page 22 to multiply.  
Check your answers using a calculator.

**a**  $14\,287 \times 8$

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**b**  $1\,086 \times 23$

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**c**  $6\,581 \times 14$

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- 2 Do these questions using the column method. Estimate the answers first, and check your final answers using a calculator.

**a**  $9\,583 \times 87$

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**b**  $7\,923 \times 59$

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The column method

$$\begin{array}{r} 1\,327 \\ \times 35 \\ \hline 6\,635 \quad (1\,327 \times 5) \\ + 39\,810 \quad (1\,327 \times 30) \\ \hline 46\,445 \end{array}$$



- 3 Solve the problems below. Use any calculation methods you have learnt.

- a** Mr Adriaan pays his workers R987 a week.

How much does he pay them over 3 months? (Work on 4 weeks per month.)

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- b** Mrs Nomdoe sells 234 bags at R75 each.

How much does she make?

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- c** Work out the prices of tickets to the soccer game.

Tickets	1	2	3	4	5	6	7	8	9
Cost	R85	R170							

- d** You get a discount for a block booking

of 20 tickets. The discount is R5 off the price of every ticket.

How much will you pay for your block booking?

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