## Fractions, decimals and percentages

Multiplying fractions and decimals and percentages

## Multiplying decimals

1 Use the fact that $46 \times 93=4278$ to help you find:
1a $4.6 \times 9.3$
1b $46 \times 0.93$
1c $0.46 \times 9.3$
$\qquad$
$\qquad$
$\qquad$

1d $\quad 0.46 \times 0.93$
1e $4600 \times 0.93$
1f $460 \times 930$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

2 Find:

2a $2 \times 0.6$
2b $5 \times 0.3$
2c $3 \times 0.4$
$2 \mathrm{~d} \quad 8 \times 1.4$

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2e $7 \times 2.5$
$2 f \quad 9 \times 3.6$
$2 g \quad 1.2 \times 2.2$
2h $3.6 \times 1.4$
$2 i \quad 6.7 \times 3.1$
2j $11 \times 8.3$
2k $6.1 \times 23$
2| $59 \times 4.2$

Multiplying a whole number and a fraction
3 Calculate:
3a $\frac{1}{2} \times 18=$
3b $\frac{1}{4} \times 20=$
3c $\frac{1}{3} \times 6=$
3d $\frac{3}{4} \times 36=$
3e $\frac{5}{7} \times 14=$
3f $\frac{6}{7} \times 21=$

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3 g $\frac{5}{9} \times 45=$
3h $\frac{3}{11} \times 22=$
3i $\frac{5}{16} \times 32=$

Finding a fraction of a fraction

4 Use the grids below to find the solution to the following multiplications:

4a $\frac{1}{7} \times \frac{1}{10}=$


4b $\frac{2}{7} \times \frac{3}{10}=$


4c $\frac{4}{5} \times \frac{4}{7}=$


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5 Find each of the following, cancelling when possible.

5a $\frac{3}{4} \times \frac{5}{7}=$

5b $\frac{1}{5} \times \frac{7}{8}=$

5c $\frac{4}{5} \times \frac{1}{12}=$

5d $\frac{3}{7} \times \frac{9}{10}=$

5e $\frac{4}{7} \times \frac{5}{8}=$

5f $\frac{6}{7} \times \frac{3}{4}=$

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5 g $\frac{2}{7} \times \frac{3}{8}=$

5h $\frac{1}{6} \times \frac{4}{7}=$

5i $\quad \frac{3}{5} \times \frac{10}{9}=$

Multiplying with mixed numbers
6 Calculate:
6a $1 \frac{1}{2} \times \frac{1}{2}=$

6b $1 \frac{3}{4} \times \frac{2}{3}=$

6c $4 \frac{1}{5} \times \frac{1}{3}=$

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6d $4 \frac{1}{2} \times \frac{1}{5}=$

6e $3 \frac{1}{8} \times \frac{3}{5}=$

6f $\quad 1 \frac{1}{2} \times 3 \frac{1}{2}=$

Finding a percentage of an amount
7 Calculate:

7a $40 \%$ of $200=$

7b $5 \%$ of $150=$

7c $6 \%$ of $20=$

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7d $3 \%$ of $50=$

7e $90 \%$ of $800=$

7f $25 \%$ of $84=$
$7 \mathrm{~g} \quad 60 \%$ of $30=$

7h $85 \%$ of $20=$
$7 i \quad 15 \%$ of $30=$

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8 Complete the following diagram:


