WORKSHEET

Percentage shortcuts

When solving percentage problems, often it is more convenient to type percentages as decimals into the calculator.

1 Write as decimals.

a 12% **b** 73% **c** 5% **d** 40% **e** 18.6% **f** 8%

g 3.1% **h** 122% **i** 6.95% **j** $12\frac{1}{2}$% **k** 150% **l** $8\frac{1}{4}$%

Example *12% of \$91 = 0.12 × 91 = \$10.92*

2 Evaluate each expression.

a 24% of \$60 **b** 81% of \$491 **c** 7% of \$36 **d** 20% of \$77.30

e 44.5% of \$320 **f** 8.9% of \$134 000 **g** 1% of \$74 **h** 9.25% of \$49

i 18% of \$296 **j** $6\frac{1}{2}$% of \$2000 **k** 118% of \$54 **l** 16.3% of \$23.50

Example *Increase \$64 by 15%*
100% + 15% = 115%
115% × \$64 = 1.15 × 64 = \$73.60 (Check this gives the correct answer!)

3 Increase:

a \$79 by 15% **b** \$30 by 25% **c** \$128 by 40% **d** \$340 by 6%

e \$22.30 by 11% **f** \$395 by 5% **g** \$75.40 by 10% **h** \$220 by 16%

i \$381 by $7\frac{1}{4}$% **j** \$42.20 by 12.8% **k** \$528.60 by 8.3% **l** \$45.50 by 100%

Example *Decrease (discount) \$45 by 10%*
100% − 10% = 90%
90% × \$45 = 0.9 × 45 = \$40.50

4 Decrease:

a \$30 by 10% **b** \$75 by 8% **c** \$800 by 5% **d** \$179 by 15%

e \$88.50 by 12% **f** \$460 by 18% **g** \$7440 by 30% **h** \$1050 by 45%

i \$79.90 by $9\frac{3}{4}$% **j** \$235 by 5.2% **k** \$67 by 66% **l** \$380.10 by 33%

5 Georgia earns 5% commission on all her sales of kitchenware. How much will she earn from selling $8750 worth of kitchenware?

6 The Jean Pool is having a '12% off' sale. Calculate the sale price of each item.

a jeans $74.60 **b** caps $12.80 **c** shirts $37.50

7 Patrick earns a salary of $78 290 but received a pay rise of 8.5%. Calculate his new salary.

8 A sum of $5000 is invested in a savings account which earns 7% interest each year.

a Complete: Increasing $5000 by 7% is the same as multiplying $5000 by _____.

b Calculate the size of the $5000 investment after 1 year.

c Increase the answer in part by 7% to find the size of the investment after another year.

d How much is the investment after another year (over 3 years)?

e **Challenge:** What is the meaning of this formula: $A = 5000 \times (1.07)^n$?

Answers

1 **a** 0.12 **b** 0.73 **c** 0.05 **d** 0.4 **e** 0.186 **f** 0.08
g 0.031 **h** 1.22 **i** 0.0695 **j** 0.125 **k** 1.5 **l** 0.0825

2 **a** $14.40 **b** $397.71 **c** $2.52 **d** $15.46 **e** $142.40 **f** $11 926
g 74c **h** $4.53 **i** $53.28 **j** $130 **k** $63.72 **l** $3.83

3 **a** $90.85 **b** $37.50 **c** $179.20 **d** $360.40 **e** $24.75 **f** $414.75
g $82.94 **h** $255.20 **i** $408.62 **j** $47.60 **k** $572.47 **l** $91

4 **a** $27 **b** $69 **c** $760 **d** $152.15 **e** $77.88 **f** $377.20
g $5208 **h** $577.50 **i** $72.11 **j** $222.78 **k** $22.78 **l** $254.67

5 $437.50

6 **a** $65.65 **b** $11.26 **c** $33

7 $84 944.65

8 **a** 1.07 **b** $5350 **c** $5724.50 **d** $6125.22
e The size of the investment after n years