Planner

# Using a calculator (1)

- Using your calculator for complex calculations
- Using the calculator memory
- Checking calculator answers by estimation

Keywords

You should know

explanation 1

**1** Work these out without a calculator. Then check your answers with a calculator.

**a** $7 + 5 \times 2$ **b** $25 - 3 \times 8$ **c** $14 + 7 - 3 \times 5$

**d** $18 \div 3 + 22 \div 11$ **e** $37 - 44 \div 4 + 21 \div 3$ **f** $48 \div 3 \div 8$

**2** Use a calculator to work out the following calculations.

**a** $37.2 - 7 \times 4.9$ **b** $12.8 + 9.4 \times 8$ **c** $11.3 - 9.8 + 7.2 \times 6$

**d** $67.8 - 35.7 \div 7$ **e** $46.2 \div 3 + 71.1 \div 9$ **f** $18.6 + 11 \times 9.2 - 45.3$

**3** Use the $x^2$ key on your calculator to find the value of these calculations.

**a** $3.9^2$ **b** $12.8^2$ **c** $6.72^2$

**d** $50 - 6.8^2$ **e** $8.4^2 + 6.5^2$ **f** $21.6^2 - 19.9^2$

**4** Use the $\sqrt{\ }$ key on your calculator to find the value of these calculations.

**a** $\sqrt{70.56}$ **b** $\sqrt{151.29}$ **c** $\sqrt{376.36}$

**d** $11.7 + \sqrt{210.25}$ **e** $\sqrt{353.44} - 7.69$ **f** $10 \times \sqrt{34.4569}$

**5** Use the $x^2$ and $\sqrt{\ }$ keys on your calculator to work out these calculations.

**a** $2.4^2 - \sqrt{31.36}$ **b** $5 \times \sqrt{2.89} + 1.6^2$

**c** $7 \times 2.76^2 + 4.5^2$ **d** $3.09^2 - 2 \times \sqrt{16}$

**e** $3 \times \sqrt{3.61} - 2 \times \sqrt{7.29}$ **f** $1.7 \times 1.56^2 - 3.2 \times \sqrt{1.5625}$

explanation 2 online

**6** Use brackets on your calculator to find the value of each of these calculations.

**a** $6.4 \times (12.8 - 7.95)$ **b** $(3.7 + 5.4)^2$

**c** $32 - 4.8 \times (7.6 - 1.9)$ **d** $(18.6 + 19.7) \div 5$

**e** $29 \div (6.72 + 3.28)$ **f** $(2.3 + 6.9) \times (3.8 + 4.7)$

**7** Use your calculator and insert brackets where necessary to work out these.

**a** $\sqrt{73.95 + 22.09}$ **b** $\dfrac{83.2}{4.7 + 8.1}$

**c** $\sqrt{300 - 17.76}$ **d** $\dfrac{89.94 + 41.92}{3.8}$

**e** $\dfrac{179.01}{2.6 \times 4.5}$ **f** $11 \times \sqrt{15.21}$

**g** $\dfrac{44.5 + \sqrt{20.25}}{9.8}$ **h** $\dfrac{8.7^2 - 5.3^2}{8.7 - 5.3}$

**8** Work these out and round your answers to the nearest whole number.

**a** $5.87 + 7.9 \times 6.3$ **b** $4.87^2$

**c** $\sqrt{11.92}$ **d** $450 - 9 \times (2.7 + 11.8)$

**e** $\sqrt{11^2 + 12^2}$ **f** $4 \times 2.35^2$

**9** Work these out to the nearest pound.

**a** £68.51 × 1.175 **b** £428.56 × 0.175

**c** £3211 ÷ 7 **d** 8 × £43.24 + 17 × £16.35

**e** £500 − 2.4 × £98.76 **f** 36 × (£1.97 + 85p)

**10** Work these out to the nearest kilogram.

**a** $17 \times 5.648\,\text{kg}$ **b** $12 \times 4.38\,\text{kg} - 18\,\text{kg}$

**c** $\dfrac{16.6\,\text{kg} + 18.2\,\text{kg} + 5.4\,\text{kg}}{3}$ **d** $(18 - 2.3) \times 4.8\,\text{kg}$

explanation 3

**11** A group of students returns from holiday with some American dollars. The bank will pay them £0.503 042 for each dollar. Calculate how much they receive to the nearest penny on the following amounts of money.

**a** \$147 **b** \$28 **c** \$89

**d** \$63 **e** \$185 **f** \$96

Use the memory keys to help you.

**12** Pete the plumber has to work out how much VAT he has charged his customers. He does this by multiplying each bill total by 0.148 936 17.

Find the amount of VAT that Pete has included in these amounts to the nearest penny.

**a** £2782.40 **b** £1015.20

**c** £1373.58 **d** £899.27

**e** £571.96 **f** £3417.59

Use the memory keys.

explanation 4 online

**13** Copy and complete to find estimates.

In each case, state whether the actual answer is more or less than your estimate.

**a** $20.657 + 3.869 \approx 21 + \square = \square$ **b** $9.8734 \times 14.910\,79 \approx 10 \times \square = \square$

**c** $8.192\,43^2 \approx \square^2 = \square$ **d** $\sqrt{84.348\,21} \approx \sqrt{\square} = \square$

**14** Some of these calculations show incorrect answers. Use estimation to find out which are incorrect. Use a calculator to work out the actual answers.

**a** $4.768 \times 9.976 = 87.565\,568$ **b** $7.1489^2 = 51.106\,771\,21$

**c** $3127 + 4865 + 8076 + 2998 = 17\,366$ **d** $\sqrt{47.987} = 7.136\,587\,4$

**e** $(5.738 + 10.279)^2 = 256.544\,289$ **f** $129.7836 \div 25 = 5.191\,344$