



Using a calculator

- Using the square and square root keys keys
- Using a calculator for complex calculations
- Converting time given in decimal format into hours, minutes and seconds

Keywords

You should know

explanation 1a

explanation 1b

explanation 1c

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

a 15^2

b $\sqrt{169}$

c 21^2

d $\sqrt{676}$

e $\sqrt{900} - 21$

f $8^2 + 32$

g $13 + \sqrt{289}$

h 3×11^2

i $8 \times \sqrt{441}$

j $\sqrt{361} + 9^2$

k $17^2 - \sqrt{121}$

l $\sqrt{529} + \sqrt{64} + 13^2$

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

a 4.2^2

b $\sqrt{404.01}$

c 11.5^2

d $\sqrt{278.89}$

e $6.8^2 + 11$

f $34 + \sqrt{70.56}$

g $\sqrt{82.81} - 5$

h $2.9^2 - 4$

i $\sqrt{134.56} + 7.1^2$

j $3.7^2 + 8.2^2$

k $7.1 \times \sqrt{57.76}$

l $2.4^2 + \sqrt{376.36}$

3 Use the bracket keys () on your calculator to work these out.

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 $(2.3 + 6.9) \times (3.8 + 4.7)$

4 Use the bracket keys on your calculator to work these out.

a $\frac{20 - 8}{4}$

b $\frac{5^2 + 15}{10}$

c $19 + \frac{18 - 6}{24}$

d $\frac{8 + 26}{47 - 7}$

e $\sqrt{35 + 29}$

f $\sqrt{7.5 \times 4.8} \times 7$

g $\left(4 + \frac{16}{5}\right) \times 3$

h $4.1 \times (8.6 - 2.5)^2$

i $2 \times \frac{16 - 10}{4}$

j $\frac{22^2 - 3.8^2}{25}$

k $\sqrt{2.25 \times 4}$

l $\sqrt{4 \times 6.25}$

5 Which of these calculations is incorrect? Use your calculator to help you.

a $5^2 + \frac{15}{10} = 26.5$

b $\frac{(12 - 8)^2}{2} = 8$

c $\frac{12^2 - 8^2}{2} = 112$

d $\frac{12^2}{2} - \frac{8^2}{2} = 40$

explanation 2

Use the following information to help you answer questions **6–8**.

These were the approximate exchange rates between pounds (£) and some other currencies in September 2008.

£1 = 1.26 euros

£1 = 190.46 Japanese yen

£1 = 1.77 US dollars (\$)

£1 = 12.10 Chinese yuan



6 How many pounds would be exchanged for these amounts?

a 1000 euros

b 500 US dollars

c 10 000 Japanese yen

d 600 Chinese yuan

e 400 euros and 8000 Japanese yen

f 450 US dollars and 320 Chinese yuan

Remember to round your answers to the nearest 1p.

7 a A family of four pays \$67 for a meal while on holiday in the USA.

How much did the meal cost in pounds?

b A couple pay 650 yuan for an extra tour while holidaying in China.

How much did this cost in pounds?

c A hotel in Boston charges \$160 a night.

How much would it cost, in pounds, to stay for three nights?

- 8** Derek is shopping on the internet. He finds what he wants for £39 on a British website or \$55 on an American website. He chooses to buy from the American website because it is cheaper.
- How much do the American goods cost, in pounds?
 - Derek will be charged \$18.99 to ship his package to the UK.
Is it still cheaper to buy from the American website?

explanation 3

- 9** Change each of these parts of a day into hours.
- 0.5 of a day
 - 0.25 of a day
 - 0.75 of a day
- 10** Change each of these parts of an hour into minutes.
- 0.2 of an hour
 - 0.75 of an hour
 - 0.85 of an hour
 - 0.66... of an hour
 - 0.35 of an hour
 - 0.95 of an hour
- 11** Mary boards a train at 12:32. Her trip takes 0.7 of an hour.
- How long, in minutes, is her trip?
 - What time does she arrive at her destination?
- 12** Change each of these times into hours and minutes.
- 3.5 hours
 - 4.75 hours
 - 1.8 hours
 - 1.1 hours
 - 7.65 hours
 - 12.35 hours
- 13** Ishma spends 0.25 of an hour driving to the high street and 0.95 of an hour shopping. How much time, in hours and minutes, is this in total?
- 14** A pupil spends $\frac{1}{3}$ of the day sleeping and $\frac{1}{10}$ of the day eating.
- Calculate the total amount of time he spends either eating or sleeping.
Give your answer in hours and minutes.
 - He spends $\frac{1}{4}$ of the remaining time playing with friends.
How many hours and minutes is this?