## Money: Working out change

## Question

Sarah has $£ 1$. She buys a bar of chocolate for 37 p. How much change does she receive?
The quickest way to do this sum is to count from 37 p up to $£ 1$.
37 p to 40 p is $3 p$ Say 38, 39, 40 (Count up to the ten above)
40 p to $£ 1$ is 60 p Say $50,60,70,80,90, £ 1$ (Count up to the pound above) 63p change

Question
Paul has $£ 10$. He spends $£ 3.21$. How much change does he receive?

| $£ 3.21$ to $£ 3.30$ is$9 p$ (Count to the ten above) |  |
| :--- | :--- |
| $£ 3.30$ to $£ 4.00$ is 70 p | (Count to the pound above) |
| $£ 4.00$ to $£ 10.00$ is $\frac{£ 6.00}{}$$£ 6.79$ change (Count up to $£ 10.00$ ) |  |

It may help to count on your fingers.
Count on your fingers from $£ 3.21$ to $£ 3.30$


Now count in tens up to $£ 4$


That is $70 p$
£6.79

That is $£ 6$

## Estimating lengths

You will not have a ruler in the mental arithmetic tests. Therefore you will need something to help you estimate lengths. Measure the following and write the answer to the nearest centimetre.

1 Measure the width of your finger nail on your smallest finger.


It is probably about 1 cm

2 Measure the length of your first finger.


It is probably between 4 cm and 7 cm

If you are asked to measure a length you can use your finger as a guide.

Remember that as you grow older your fingers may become slightly longer so check the lengths before your exam.

Example What is the length of this line?


Suppose your finger is 7 cm long.
You have to suppose that the line is about $1 \frac{1}{2}$ fingers long.
So the line is about 10 or 11 cm long.

Another good way is to learn the length of your pen and pen top. But if you do this make sure you take the correct pen into the test.

## Estimating lengths and angles

Estimate the length of these lines. Give your answers in centimetres.
1
2

3
4
5

This is a map. The scale is 1 cm represents 10 km . Estimate the distance in kilometres between:
6 A and B
7 A and C
A
B
8 B and C
9 A and D
$10 B$ and $D$
C•

## D

Estimate the size of each angle:
11

12

13

14

15

16

17

18


Answers
$1 \quad 9-12 \mathrm{~cm}$
$2 \quad 14-17 \mathrm{~cm}$
$3 \quad 4-7 \mathrm{~cm}$
$4 \quad 7-10 \mathrm{~cm}$
$5 \quad 1-4 \mathrm{~cm}$
$1120^{\circ}-40^{\circ}$
$1785^{\circ}-95^{\circ}$
$6 \quad 80-120 \mathrm{~km}$

| 7 | $10-30 \mathrm{~km}$ |
| :--- | :--- |
| 8 | $80-120 \mathrm{~km}$ |
| 9 | $70-100 \mathrm{~km}$ |
| 10 | $20-50 \mathrm{~km}$ |
| 11 | $20^{\circ}-40^{\circ}$ |
| 12 | $190^{\circ}-210^{\circ}$ |

$13140^{\circ}-160^{\circ}$
$14100^{\circ}-120^{\circ}$
$15320^{\circ}-340^{\circ}$
$1670^{\circ}-89^{\circ}$
$18340^{\circ}-359^{\circ}$

## Key Stage 3 Higher Tier Test 1 Mental Arithmetic

| First Name |
| :--- |
| Last Name |
| Class |
| Maths teacher |

Total marks


Practice question



