Worksheet 1.1

All the numbers listed below can be found hidden in the wordsearch diagram.
See if you can find them all.

E	I	G	H	T	E	E	N	G	Y	O	R	W	O	Q	R	T	S
P	R	E	A	S	D	G	I	V	T	N	E	E	N	F	X	I	I
T	W	E	L	V	E	S	N	F	R	E	M	M	E	N	X	V	X
W	T	N	F	C	R	A	E	A	I	T	A	O	T	T	E	E	M
J	K	T	A	G	Z	T	T	S	H	H	K	N	H	W	E	R	I
K	D	M	M	M	E	E	Y	E	T	O	V	O	O	O	B	S	L
N	E	N	I	I	T	N	F	J	D	U	U	S	U	T	M	V	L
M	J	E	L	O	R	O	I	I	N	S	J	O	S	H	U	F	I
C	I	V	L	P	Y	L	V	L	A	A	O	N	A	O	T	O	O
E	O	E	I	G	H	T	E	N	D	N	T	E	N	U	S	R	N
F	P	S	O	A	N	D	D	R	E	D	J	H	D	S	C	T	A
Y	S	Y	N	L	L	A	L	M	R	A	K	U	T	A	J	Y	N
O	D	T	T	E	N	L	I	Y	D	N	D	N	W	N	B	S	D
P	E	N	B	D	M	L	G	T	N	D	C	D	O	D	A	E	T
F	T	E	T	P	L	R	S	N	U	S	A	R	H	A	V	V	W
R	G	W	K	I	Q	E	H	E	H	E	E	E	U	N	X	E	E
T	O	T	O	A	Q	U	E	W	E	V	T	D	N	D	E	N	N
J	S	N	S	E	V	E	N	T	E	E	N	T	D	F	P	T	T
K	I	J	Y	E	S	E	R	O	R	N	H	H	R	I	B	H	Y
L	X	F	G	H	T	E	E	N	H	T	C	O	E	F	M	O	T
E	J	R	E	E	E	T	I	O	T	Y	B	U	D	T	A	U	H
F	I	V	E	M	I	L	L	I	O	N	G	S	J	E	S	S	R
B	I	R	G	P	D	S	E	I	I	M	N	A	C	E	E	A	E
F	O	U	R	H	U	N	D	R	E	D	A	N	D	N	I	N	E
N	N	K	A	S	F	R	T	H	I	M	L	D	T	L	I	D	T

1 12 **2** 5 000 000 **3** 409 **4** 27 **5** 100 000

6 47 000 **7** 2015 **8** 17 **9** 18 **10** 95

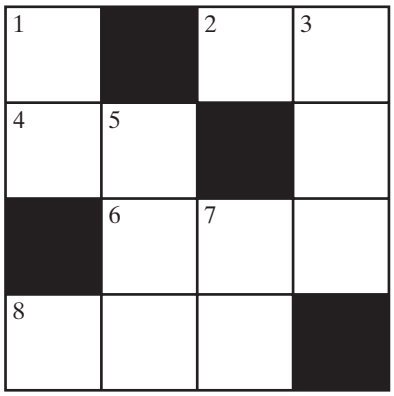
11 500 000 **12** 8 **13** 6 000 023 **14** 330 **15** 1200

16 20 **17** 1 000 000 **18** 6002 **19** 6 **20** 1070

Worksheet 1.2/1.3

Complete these two crossnumber puzzles.

(A)



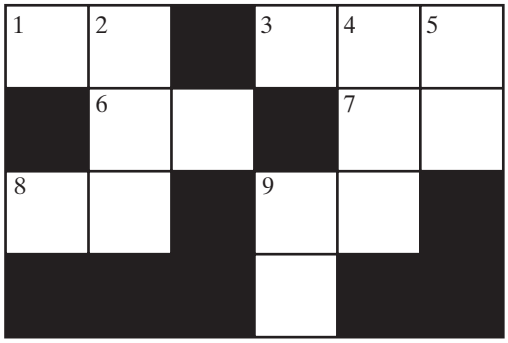
ACROSS

2 28 + 35
4 99 − 42
6 867 − 546
8 157 + 252

DOWN

1 49 + 36
3 167 + 214
5 917 − 187
7 275 − 246

(B)



ACROSS

1 16 + 7
3 803 − 646
6 90 − 26
7 23 + 15 + 54
8 56 + 74 − 50
9 78 − 69 + 1

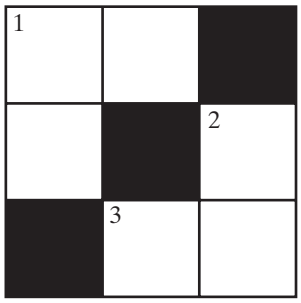
DOWN

2 182 + 178
4 257 + 333
5 161 − 89
9 750 + 123 − 858

Worksheet 1.4

Complete these three crossnumber puzzles.

(A)



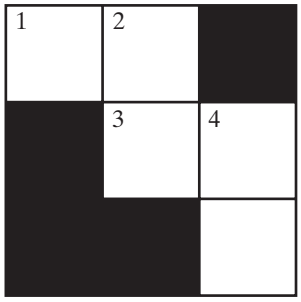
ACROSS

1 7×7
3 3×8

DOWN

1 6×7
2 8×8

(B)



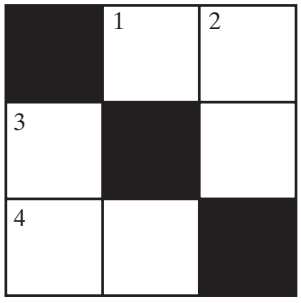
ACROSS

1 9×6
3 9×9

DOWN

2 6×8
4 8×2

(C)



ACROSS

1 6×2
4 10×5

DOWN

2 7×4
3 5×7

Worksheet 1.5

Section A

1 46×10 = ...

2 83×100 = ...

3 92×1000 = ...

4 70×100 = ...

5 129×10 = ...

6 81×1000 = ...

7 39×100 = ...

8 5×1000 = ...

9 905×10 = ...

10 80×100 = ...

11 680×10 = ...

12 50×100 = ...

Section B

1 8.3×10 = ...

2 9.641×100 = ...

3 8.7×1000 = ...

4 2.014×10 = ...

5 $0.389\,1 \times 1000$ = ...

6 3.8×100 = ...

7 13.64×100 = ...

8 3.903×10 = ...

9 285.6×1000 = ...

10 10.05×100 = ...

11 $0.087\,3 \times 1000$ = ...

12 0.511×10 = ...

Section C

Find the correct answer from the list at the bottom of the section.

1 51×30 = ...

2 82×300 = ...

3 23×20 = ...

4 69×400 = ...

5 43×200 = ...

6 72×40 = ...

7 51×300 = ...

8 69×50 = ...

9 23×800 = ...

10 21×80 = ...

460 **1530** **1680** **2880** **3450**
8600 **15 300** **18 400** **24 600** **27600**

Worksheet 1.6

Section A

1 8500 ÷ 10 = ...

2 9800 ÷ 100 = ...

3 63 000 ÷ 1000 = ...

4 81 000 ÷ 100 = ...

5 650 ÷ 10 = ...

6 89 000 ÷ 10 = ...

Section B1

1 65.83 ÷ 10 = ...

2 98.6 ÷ 100 = ...

3 8.7 ÷ 100 = ...

4 71.2 ÷ 1000 = ...

5 7.21 ÷ 10 = ...

6 987.4 ÷ 1000 = ...

Section B2: A mixture of 1.5 & 1.6

1 345 × 100 = ...

2 6.78 × 1000 = ...

3 98.7 ÷ 10 = ...

4 102.7 ÷ 1000 = ...

5 56 700 ÷ 100 = ...

6 8.1 × 1000 = ...

7 67 000 ÷ 100 = ...

8 4.56 × 100 = ...

9 0.051 × 10 = ...

10 96.25 ÷ 100 = ...

11 12.1 × 1000 = ...

12 6.5 ÷ 100 = ...

13 23 × 1000 = ...

14 9802 ÷ 100 = ...

Section C

Find the correct answer from the list at the bottom of the section.

1 87 400 ÷ 20 = ...

2 927 000 ÷ 300 = ...

3 501 600 ÷ 40 = ...

4 59 460 ÷ 30 = ...

5 3550 ÷ 50 = ...

6 927 000 ÷ 30 = ...

7 168 000 ÷ 800 = ...

8 501 600 ÷ 400 = ...

9 777 000 ÷ 700 = ...

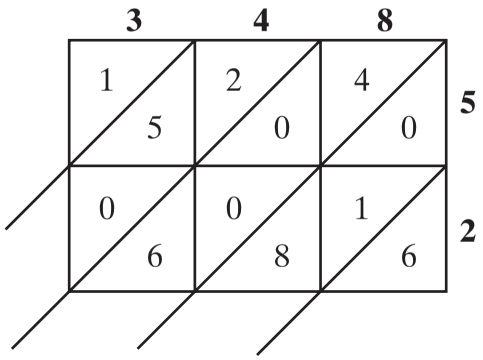
10 87 400 ÷ 200 = ...

71 210 437 1110 1254
1982 3090 4370 12 540 30 900

Worksheet 1.7

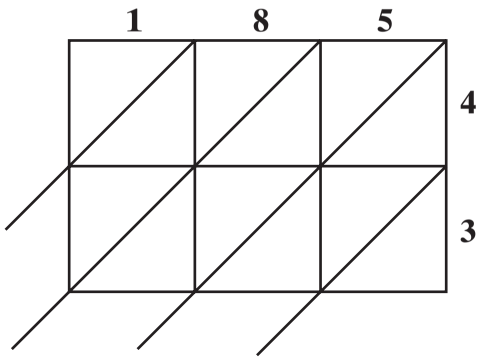
Use the grids to help you work out these long multiplication sums.

1



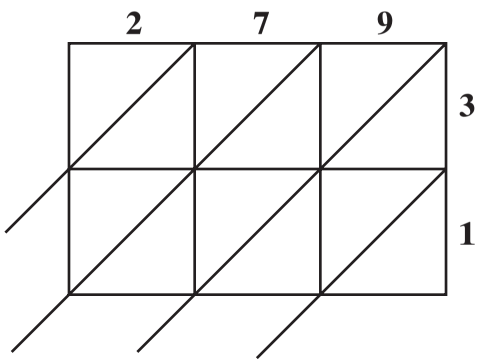
Answer: $348 \times 52 =$ .....

2



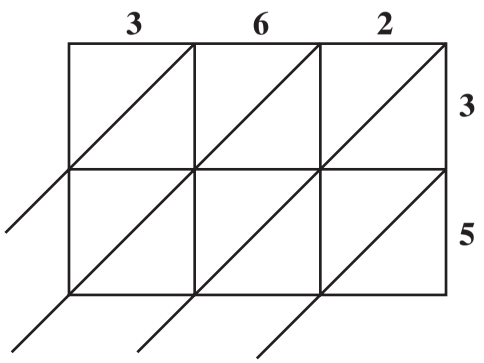
Answer: $185 \times 43 =$ .....

3



Answer: $279 \times 31 =$ .....

4



Answer: $362 \times 35 =$ .....

Worksheet 1.9

The table below shows the price, in kilograms, of some fruit and vegetables in a supermarket.

Item	Apples	Pears	Oranges	Bananas	Grapes	Potatoes	Onions	Carrots	Mushrooms	Beans
Price per kilogram (kg)	£1.56	£1.75	96p	85p	£2.34	73p	82p	67p	£2.13	£1.24

Work out the following shopping bills and write down the change from £10

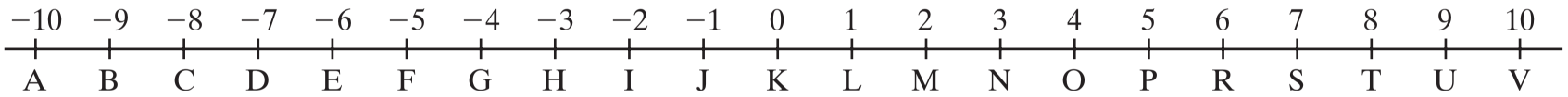
1
2 kg apples =
3 kg oranges =
1 kg mushrooms =
TOTAL =
Change from £10 =

2
3 kg onions =
2 kg grapes =
2 kg carrots =
TOTAL =
Change from £10 =

3
4 kg potatoes =
1 kg beans =
2 kg pears =
TOTAL =
Change from £10 =

4
1 kg mushrooms =
5 kg bananas =
4 kg onions =
TOTAL =
Change from £10 =

Worksheet 1.10/1.11



Work out each question and then use the answers to work out the sentence.

$4 - 6 =$ ..... $5 \times -2 =$ ..... $8 - 6 =$ .....

$3 - 7 =$ ..... $-1 + 7 =$ ..... $-5 - 1 =$ ..... $-10 \times 1 =$ ..... $4 \times 2 =$ .....

$-8 - 2 =$ ..... $-2 + 10 =$ .....

$5 - 2 =$ ..... $3 \times -2 =$ ..... $2 \times -2 =$ ..... $-5 - 5 =$ ..... $-4 \times -2 =$ ..... $3 - 5 =$ ..... $4 - -6 =$ ..... $-6 \times 1 =$ .....

$-6 + 9 =$ ..... $5 - -4 =$ ..... $-1 \times -2 =$ ..... $3 \times -3 =$ ..... $2 - 8 =$ ..... $-3 \times -2 =$ ..... $4 - -3 =$ .....

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Worksheet 1.12

Round the following according to the bracket after the number. For example:

7.53 (1 s.f.) means round 7.53 to 1 significant figure = 8
8.43 (1 d.p.) means round 8.43 to 1 decimal place = 8.4
1581 (hundred) means round 1581 to the nearest hundred = 1600

1 9.8367 (2 d.p.) =

2 62 398 (thousand) =

3 81.43 (1 s.f.) =

4 38.92 (whole number) =

5 63.54 (1 s.f.) =

6 3.6549 (2 d.p.) =

7 5629 (1 s.f.) =

8 7832 (ten) =

9 0.03782 (3 d.p.) =

10 67 456 (1 s.f.) =

11 6127 (thousand) =

12 4.0307 (2 d.p.) =

13 43.784 (1 s.f.) =

14 6723 (hundred) =

15 8959 (ten) =

16 16 726 (thousand) =

17 5.6398 (2 d.p.) =

18 49.06 (1 s.f.) =

19 789.249 (1 d.p.) =

20 683 (1 s.f.) =

21 963.2 (1 s.f.) =

22 9123 (hundred) =

23 82.192 (1 s.f.) =

24 92.4557 (2 d.p.) =

25 37 000 (1 s.f.) =

26 178.48 (whole number) =

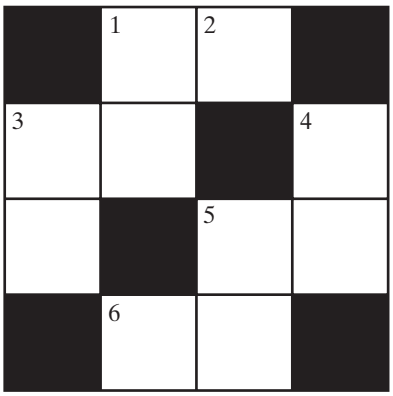
27 35 682 (1 s.f.) =

28 20 361 (hundred) =

Worksheet 2.1

Complete these three crossnumber puzzles by simplifying the ratios.

1



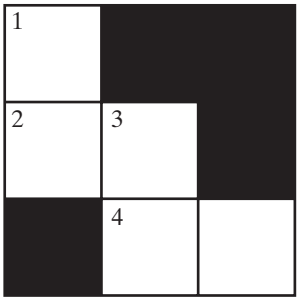
ACROSS

1 8 : 12
3 15 : 25
5 12 : 15
6 15 : 21

DOWN

1 4 : 10
3 6 : 14
4 14 : 35
5 20 : 35

2



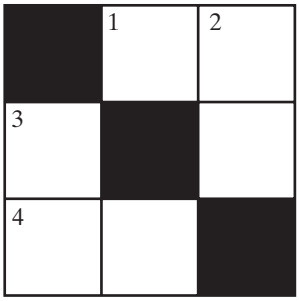
ACROSS

2 40 : 15
4 6 : 21

DOWN

1 50 : 80
3 24 : 16

3



ACROSS

1 8 : 14
4 15 : 20

DOWN

2 14 : 16
3 7 : 21

Worksheet 3S.1

1 Write the following decimals using numbers:
- **a)** eight point four
- **b)** nineteen point nine
- **c)** thirty-two point seven one
- **d)** ten point zero eight
- **e)** two hundred and forty-five point zero one

2 Match the words to the correct decimals using the place value headings 'tenths', 'hundredths' and 'thousandths'.
Remember that: one hundredth = 0.01, and one tenth = 0.1

a) eight tenths	0.006
b) four hundredths	3.7
c) two thousandths	0.8
d) three and seven tenths	0.55
e) fifty-five hundredths	0.002
f) six thousandths	0.04

Worksheet 3S.2

1 On school sports day, the sprint was run by 5 students.
The table shows their times in seconds:

Anne	14.39
Balvir	14.67
Colin	13.91
Dawud	14.07
Emily	14.70

a) Who won the race?
b) List the second and third place pupils.
c) Whose time was slowest?

2 William has £3.75, Yasmin has £3.57 and Zara has £3.70
Who has the most money?

3 Circle the number which is larger in each pair.

a) 5.65, 5.55 **d)** 0.07, 0.70

b) 2.83, 2.38 **e)** 1.9, 1.86

c) 20.05, 20.5 **f)** 8.234, 8.243

4 Four girls compete in a gymnastics competition.
The table shows the scores they gain in each activity.

	Bars	**Beam**	**Floor**	**Vault**
Florence	8.72	8.59	8.50	8.90
Gabrielle	9.00	8.60	8.51	8.07
Harriet	8.81	8.95	8.05	7.95
Isabel	8.27	8.45	8.15	8.10

a) Who won the Floor competition? .....
b) Who was last in the Bars? .....
c) Which activity did Isabel do worst in? .....
d) Which competitor was the best on the beam? .....
e) Use your calculator to find the overall winner by working out who has the most points in total. .....

5 Write a number in each gap so that the decimals are still in the order: smallest to biggest.

a) 4.05, 4.__ __ , 4.52

b) 3.88, 3.9, 3.__ __ , 3.95

c) 12.18, __ __.__ __ , __ __.__ __, 12.25, 12.29

Worksheet 3.1

1 Do the following calculations on your calculator.
Look at the answer.
Write the answers rounded to 1 d.p.

a) $10 \div 7$
b) $50 \div 11$
c) $61 \div 4$
d) $44 \div 9$
e) $63.2 \div 5$

2 The calculator screen shows π to be: 3.1415927
Circle the correct answer in **a)** and **b)**.

a) Juliet rounds this number to 1 dp.
Should she get 3.1, or 3.2 or 3?

b) Kirpal rounds to 2 d.p.
Is his answer 3.15 , 3.14 or 3.1?

Lee rounds his answer to 3 d.p.

c) What did Lee get? .....

Mel writes the answer to 4 d.p.

d) What does she write? .....

3 In PE, javelin throws have been measured too accurately.

a) Make these measurements easier for the Head of PE
by rounding them to 1 d.p. and putting them in the table.

Malcolm	19.75 m	
Nicola	20.34 m	
Olga	27.7 m	
Petra	26.41 m	
Quinton	19.86 m	

b) Who was the least successful thrower?

Worksheet 3.2

1 Write the following numbers to 1 significant figure.
Two have been done for you.

Number	1 s.f.
43.18	40
109.6	
5378	
1865	
28 947	
8098	8000

2 The following table shows the crowd capacity at five football stadiums.

Stadium	Crowd capacity
Manchester United	68 174
Newcastle United	52 218
Liverpool	45 662
Manchester City	47 900
Chelsea	42 420

a) Round each capacity to 2 s.f.
b) Now round each capacity to 1 s.f.
c) Which 3 teams have the same capacity when rounded to 1.s.f.?

3 The following calculation is done on the calculator:

$567.51 \div 6$

The correct answer is 94.585
The students obtained answers and these are shown in the table.
Each student made a mistake, and the mistakes are listed below.

Match the answer to the mistake and write the initial of the pupil in the table.
What have you spelt?

90	94.59	573.51	9.5	561.51	9.46	95	94.6

Izzie: divided by 60 and rounded to 2 d.p. (**I**)
Ujala: pressed '+' instead of '÷' (**U**)
Robin: rounded to 1 s.f. (**R**)
Gwen: rounded to 1 d.p. (**G**)
Nadim: divided by 60 & rounded to 1 d.p. (**N**)
Olivia: rounded to 4 s.f. (**O**)
David: pressed '−' instead of '÷' (**D**)
Nazir: rounded to 2 s.f. (**N**)

Worksheet 3.3–3.5

1 Andy is 0.2 m taller than Bill. Bill is 1.35 m tall.
How tall is Andy? .....

2 Mrs Blake travels 5.2 km by coach and then 22.7 km by train.
How far does she travel in total? .....

3 Daphne bought a dress for £25.45 and jeans for £35.50
How much did she spend altogether? .....

4 Ellis weighs 65.2 kg and Frank weighs 70.6 kg
a) How much do they weigh altogether? .....
b) What is the difference between the weights? .....

5 Four students guess the height of a building as follows:

Gina: 2.95 m Harry: 3.1 m Izzy: 2.92 m Jim: 2.89 m

The building's actual height is 2.9 m
a) Work out the difference between the real height and each guess. .....
b) Whose guess was closest? .....

6 Choose a decimal from the box to make each statement true.

0.11	1.1	0.01	1.01	1.001	1.011	0.1

a) 19.45 − ..... = 19.35
b) 5.99 + ... = 6
c) 10.08 − ..... = 9.07
d) 0.763 + ... = 1.764
e) 25.89 − ..... = 24.79
f) 20.0 − ..... = 19.89
g) 51.283 + ... = 52.294

7 Find the total cost of:
a) 6 tins at £0.90 ..... **b)** 5 boxes at £1.50 .....
c) 7 bags at £0.75 ..... **d)** 8 bottles at £1.20 .....
e) If all these items were bought together,
how much change would you get from £30? .....

8 A large piece of cheese weighs 3.2 kg
It is shared between 4 people equally.
What weight do they receive each? .....

9 There are 3 pairs of division that give the same answer.
Match them together and find the odd one out.
a) 4.06 ÷ 2 **b)** 9.66 ÷ 3 ..... and .....
c) 6.44 ÷ 2 **d)** 8.12 ÷ 4 ..... and .....
e) 5.65 ÷ 5 **f)** 7.77 ÷ 7 ..... and .....
g) 11.3 ÷ 10 Odd one out: .....

10 Miss Fortune wins £100 at bingo.
She spends £30 at the shops and then shares the rest between four children.
How much do they each get? .....

Worksheet 3R

Work out a coded sentence by matching answers to letters in the grid below.

1 Start in the top left-hand box.
Work out the calculation in this box.
Check your answer, using a calculator if you need to.

2 Look for your answer at the top of another box.
Write down the letter you find in this box on the first line below.
It is the first letter of the coded sentence.

3 Now work out the calculation in the box with that letter.
Your answer will be in another box, where you will find the second letter.

4 Repeat steps 1 to 3 and continue to write down the letters you find.

What have you written when all the boxes are done?

Coded sentence

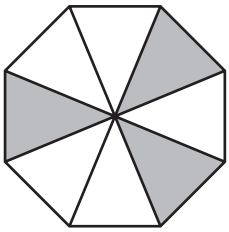
__ __ __ __ __ __ __ __ __ __ __ __ __ __ __

	26 **A** 5×1.54	2.7 **A** $9.85 - 1.52$	21 **I** 0.4×6
8.33 **R** 73.51 to 1 d.p.	3.7 **D** $1.1 + 1.01$	3100 **A** $7 \div 3.5$	2.11 **E** $3.7 + 1.3$
7.7 **S** 54.365 to 2 d.p.	2 **L** 0.09 to 1 d.p.	0.6 **E** 25.99 to 2 s.f.	2.4 **M** 3080 to 2 s.f.
5.0 **C** 0.5×42	54.37 **Y**	73.5 **E** $1 - 0.4$	0.1 **S** 0.27×10

Worksheet 4S1

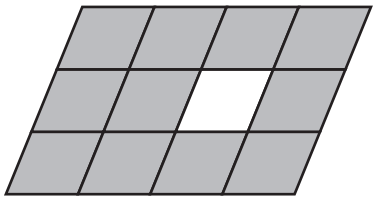
Write down what fraction of each of these shapes has been shaded.

1



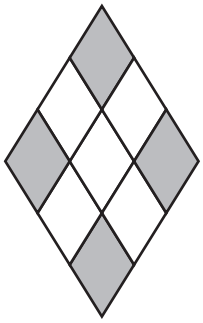
Fraction shaded: .....

2



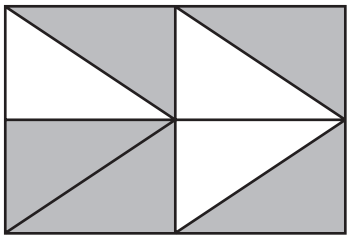
Fraction shaded: .....

3



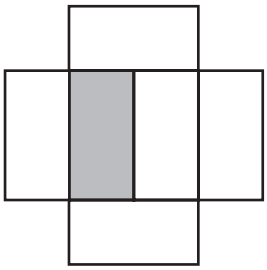
Fraction shaded: .....

4



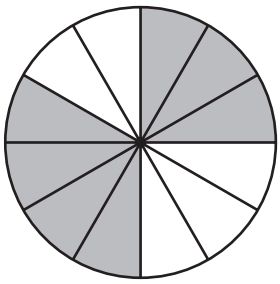
Fraction shaded: .....

5



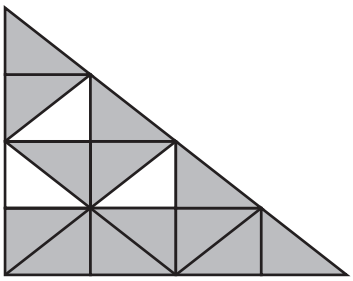
Fraction shaded: .....

6



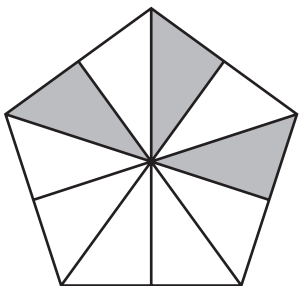
Fraction shaded: .....

7



Fraction shaded: .....

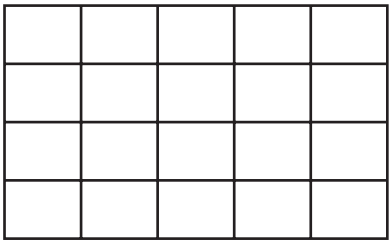
8



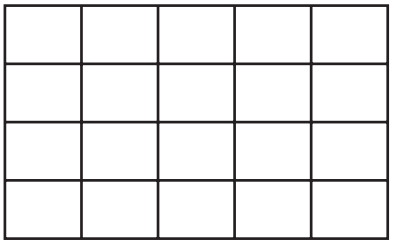
Fraction shaded: .....

Worksheet 4S2

1 **a)** Shade $\frac{3}{4}$

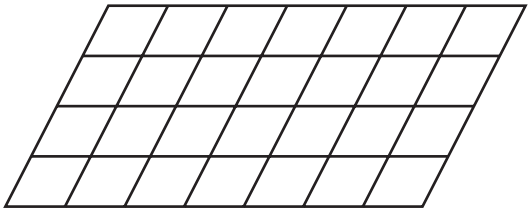


b) Shade $\frac{3}{5}$

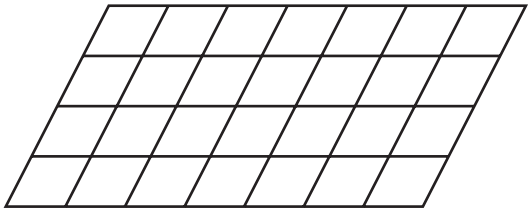


c) Which is the larger fraction, $\frac{3}{4}$ or $\frac{3}{5}$? .....

2 **a)** Shade $\frac{1}{4}$

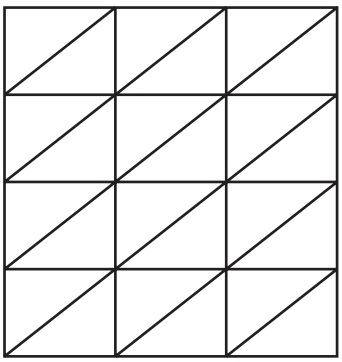


b) Shade $\frac{2}{7}$

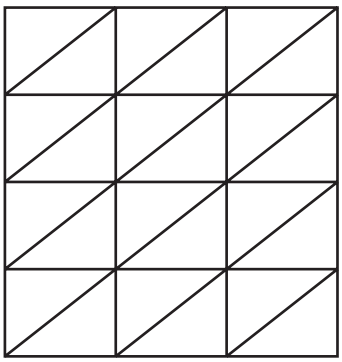


c) Which is the larger fraction, $\frac{1}{4}$ or $\frac{2}{7}$? .....

3 **a)** Shade $\frac{2}{3}$



b) Shade $\frac{3}{4}$



c) Which is the larger fraction, $\frac{2}{3}$ or $\frac{3}{4}$? .....

Worksheet 4.1A

1 Match the fraction with the corresponding decimal.
Use your calculator if you need to.

$\frac{1}{2}$		$\frac{7}{8}$	$\frac{2}{5}$	
	$\frac{3}{100}$			$\frac{3}{4}$
$\frac{1}{4}$		$\frac{6}{10}$		

0.4		0.875
	0.25	0.75
0.6		
	0.03	0.5

2 Circle the number which is the biggest in each line.
Clue: Change the fractions into decimals first.

a) 0.5 $\frac{2}{5}$ 0.52 $\frac{6}{10}$

b) $\frac{1}{4}$ 0.24 $\frac{2}{10}$ $\frac{2}{100}$

c) 0.85 $\frac{8}{10}$ $\frac{3}{5}$ 0.79

d) $\frac{9}{12}$ 0.77 0.70 $\frac{76}{100}$

3 Use your calculator to change the fractions into decimals.
Fill in the table, writing the calculator display, the recurring notation and the decimal to 2 d.p.
The first one has been done for you.

Fraction	Calculator display	Recurring notation	Round to 2 d.p.
$\frac{1}{3}$	0.3333333333	$0.\dot{3}$	0.33
$\frac{2}{3}$			
$\frac{4}{9}$			
$\frac{8}{9}$			
$\frac{8}{15}$			

4 **a)** Winnie and Xavier share a bag of crisps.
Winnie eats $\frac{3}{8}$ and Xavier eats $\frac{5}{8}$.
Who eats the most? .....

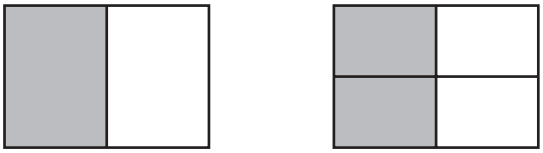
b) Steve and Todd run a 400 m race.
Steve is $\frac{1}{4}$ of the way around the track, Todd is $\frac{1}{5}$ of the way.
Who has run the furthest? .....

c) Uma and Verla share a pizza.
Uma takes $\frac{1}{3}$ and Verla eats $\frac{3}{5}$.
Who has the most pizza? .....

Worksheet 4.1B

1 Each pair of diagrams shows two fractions that are equivalent.
Write the two fractions shown in the diagrams, and work out what the numerator and denominator have been multiplied by.
The first has been done for you.

a)

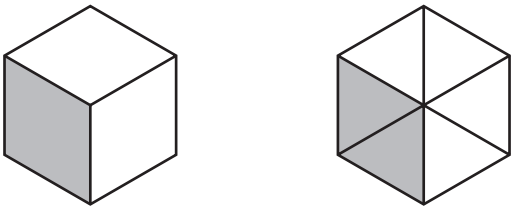


$\times 2$

$\frac{1}{2} = \frac{2}{4}$

$\times 2$

b)

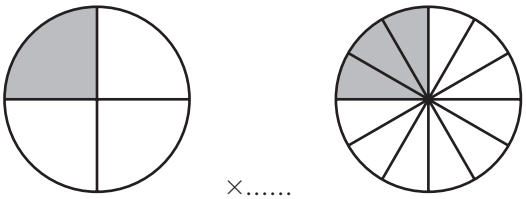


$\times$.....

..... = ...

$\times$.....

c)

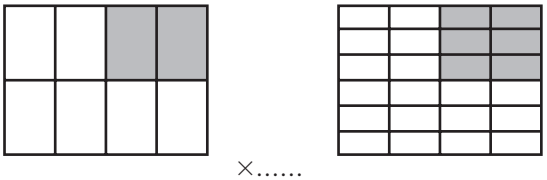


$\times$.....

..... = ...

$\times$.....

d)



$\times$.....

..... = ...

$\times$.....

(continued)

Worksheet 4.1B *(continued)*

2 Fill in the blanks by working out what the top or bottom of the incomplete fraction has been multiplied by.

Example $\frac{2}{3} = \frac{\ldots}{12}$ $\frac{2 \times 4}{3 \times 4} = \frac{8}{12}$

a) $\frac{2}{3} = \frac{\ldots}{15}$ **b)** $\frac{3}{10} = \frac{12}{\ldots}$ **c)** $\frac{2}{7} = \frac{6}{\ldots}$ **d)** $\frac{1}{4} = \frac{\ldots}{20}$

3 Circle the odd fraction out – it is not equal to the others.

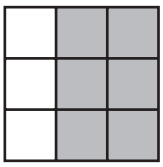
a) $\frac{1}{2}$ $\frac{50}{100}$ $\frac{2}{5}$ $\frac{6}{12}$ $\frac{9}{18}$

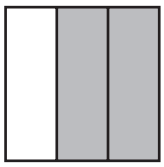
b) $\frac{10}{15}$ $\frac{3}{9}$ $\frac{4}{6}$ $\frac{8}{12}$ $\frac{2}{3}$

c) $\frac{15}{36}$ $\frac{10}{18}$ $\frac{50}{90}$ $\frac{5}{9}$ $\frac{25}{45}$

4 Using the pairs of diagrams, write the first fraction and then simplify it.

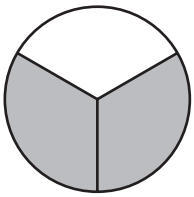
a)

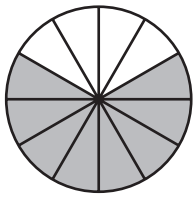




$\frac{\ldots\ldots\ldots}{\ldots\ldots\ldots} = \frac{\ldots\ldots\ldots}{\ldots\ldots\ldots}$

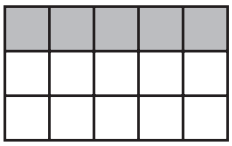
b)

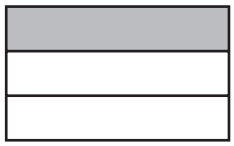




$\frac{\ldots\ldots\ldots}{\ldots\ldots\ldots} = \frac{\ldots\ldots\ldots}{\ldots\ldots\ldots}$

c)





$\frac{\ldots\ldots\ldots}{\ldots\ldots\ldots} = \frac{\ldots\ldots\ldots}{\ldots\ldots\ldots}$

Worksheet 4.4A

1 Yasmin eats $\frac{1}{5}$ of a pie and Zarena eats $\frac{2}{5}$.

a) How much of the pie has been eaten altogether? .....

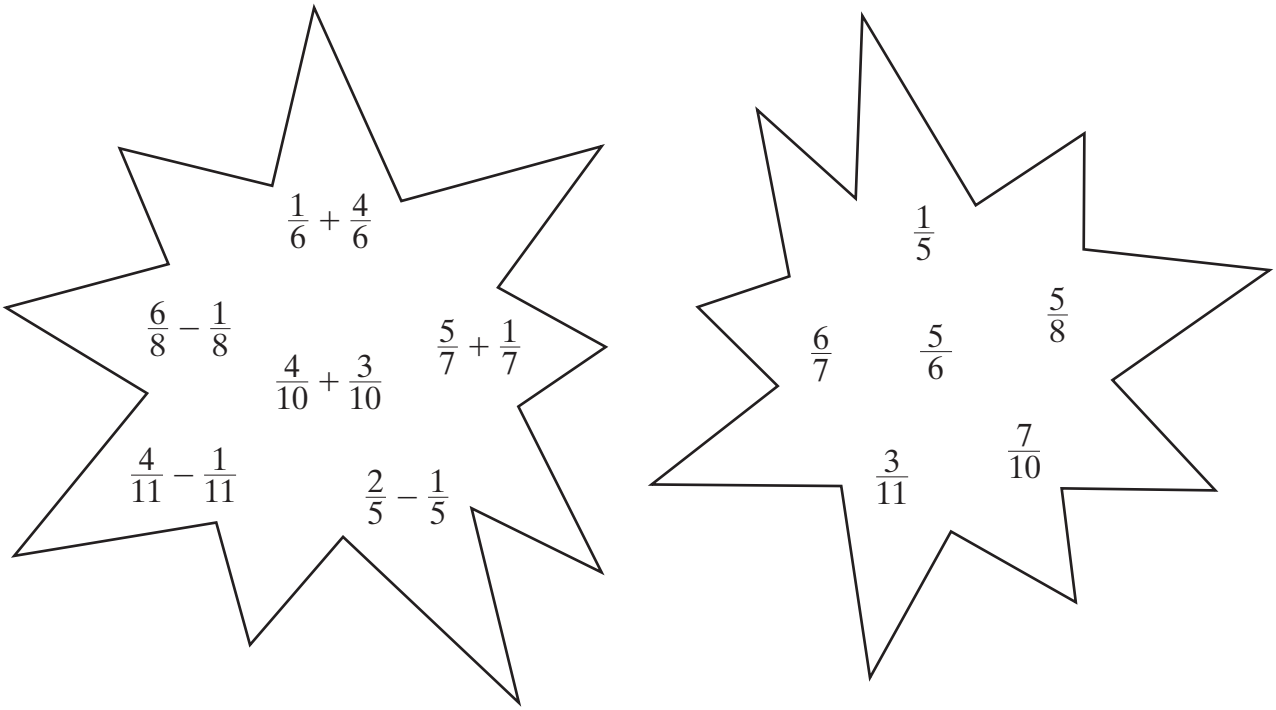
b) What fraction is remaining? .....

2 Bharat and Milan share a chocolate bar.

Bharat takes $\frac{2}{7}$ and Milan has $\frac{3}{7}$.

What fraction of the bar has gone? .....

3 Match the calculation to the correct answer.



4 Complete these calculations using equivalent fractions.

a) $\frac{1}{4} + \frac{3}{8} = \frac{\ldots}{8} + \frac{3}{8} = \frac{\ldots}{8}$

Hint: $\frac{1}{4} = \frac{2}{8}$

b) $\frac{3}{10} + \frac{7}{20} = \frac{\ldots}{20} + \frac{7}{20} = \frac{\ldots}{20}$

Hint: $\frac{3}{10} = \frac{?}{20}$

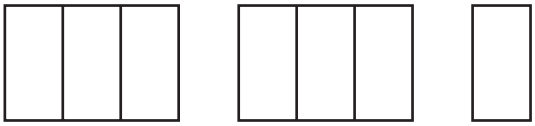
c) $\frac{11}{15} - \frac{2}{3} = \frac{11}{15} - \frac{\ldots}{15} = \frac{\ldots}{15}$

Hint: $\frac{2}{3} = \frac{?}{15}$

Worksheet 4.4B

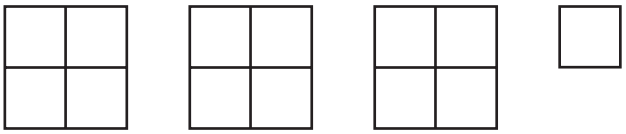
1 In **a)** to **c)**, write the mixed numbers as improper fractions.
Use the diagrams to help if you need to.

a)



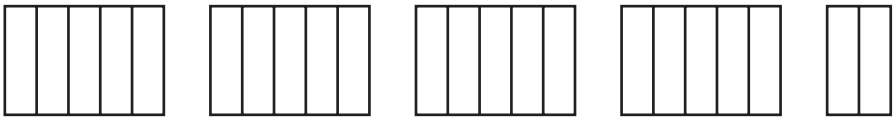
$2\frac{1}{3} = \frac{\ldots}{3}$

b)



$3\frac{1}{4} = \frac{\ldots}{4}$

c)



$4\frac{2}{5} = \frac{\ldots}{5}$

d) Seven cakes are shared equally between 2 children.
How much does each child get? .....

For **e)** and **f),** write the improper fractions as mixed numbers by working out how many whole units you have and what fraction is left over.

e) $\frac{10}{3}$ = … and $\frac{\ldots}{3}$

f) $\frac{17}{5}$ = … and $\frac{\ldots}{5}$

g) Nine apples are shared equally between 4 children.
How many apples do they each receive? .....

h) Jo says, '$2\frac{1}{2} = \frac{3}{2}$,
Is he right or wrong? .....

i) Sadie has $3\frac{1}{2}$ cheese and tomato pizzas.

(i) How many friends can have a piece if they each eat $\frac{1}{2}$ a pizza? .....

(ii) How many friends can eat if they each have $\frac{1}{4}$ of a pizza? .....

j) 18 people attend Kerubo's dinner party.

Each person will eat $\frac{1}{4}$ of an apple pie.

(i) How many whole pies must Kerubo make? .....

(ii) What fraction of a pie will be left over? .....

Worksheet 4.7

1 **a)** Find $\frac{1}{2}$ of an hour. (1 hour = 60 minutes) .....

b) Find $\frac{1}{5}$ of a metre. (1 m = 100 cm) .....

c) Find $\frac{1}{4}$ of a kilogram. (1 kg = 1000 g) .....

d) Find $\frac{1}{3}$ of 360° .....

2 Auntie Betty gives Rima, Sam and Tom £140 to share.

Rima gets $\frac{1}{7}$, Sam gets $\frac{2}{7}$ and Tom gets $\frac{4}{7}$.

Calculate how much money each of the children gets. .....

3 Climbing the wall.

$\frac{2}{3}$ of 12	$\frac{1}{5}$ of 30	$\frac{2}{5}$ of 15	$\frac{3}{8}$ of 16	$\frac{1}{6}$ of 36
$\frac{1}{4}$ of 20	$\frac{3}{4}$ of 16	$\frac{6}{7}$ of 21	$\frac{3}{5}$ of 20	
$\frac{1}{2}$ of 100	$\frac{2}{3}$ of 9	$\frac{1}{2}$ of 14	$\frac{1}{5}$ of 10	$\frac{3}{4}$ of 4
$\frac{1}{10}$ of 80	$\frac{2}{7}$ of 70	$\frac{1}{3}$ of 15	$\frac{3}{5}$ of 10	
$\frac{1}{3}$ of 27	$\frac{1}{5}$ of 25	$\frac{1}{3}$ of 30	$\frac{1}{3}$ of 60	$\frac{2}{3}$ of 6

Find a path up the wall by choosing a touching brick with the answer closest to the answer of the brick you are on.

Start at the bottom right-hand brick.

FINDING PERCENTAGES

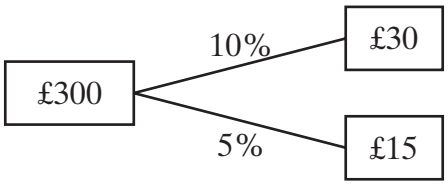
There are some clever ways that you can use percentages.

Look at this:

Starting with £300 10% is £30

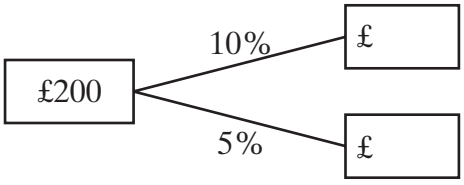
Halve both: 5% is £15 Double both 20% is £60

So:

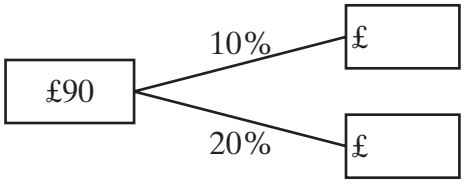


Try these, but watch out for the percentages changing:

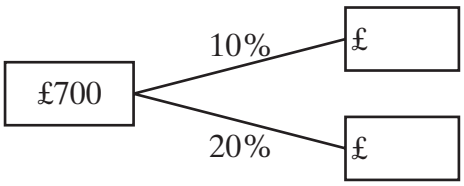
1



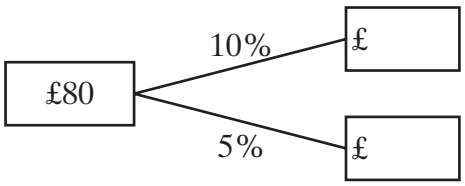
2



3



4



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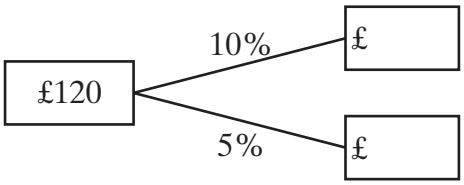

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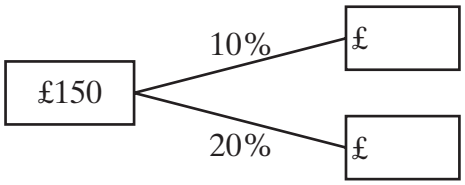
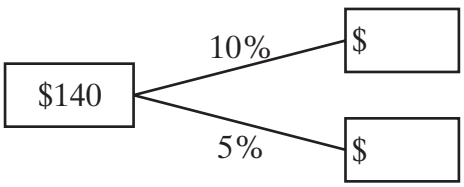
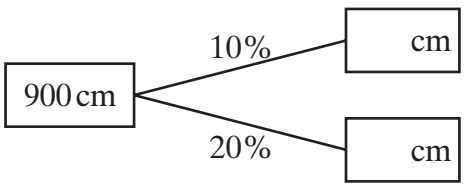


7



8



(continued)

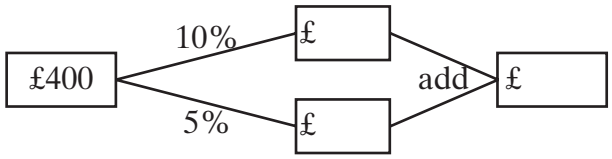
Now the 'expert' questions.

Starting with £300: 10% is £30 5% is £15 20% is £60

You can work out 15%: 10% + 5%
15%: £30 + £15 = £45

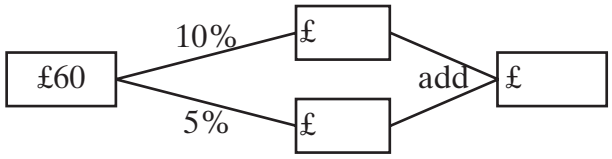
Try these, but watch the percentages again.

9



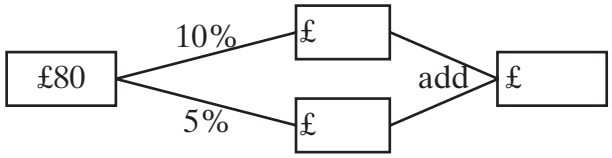
15% of £400

10



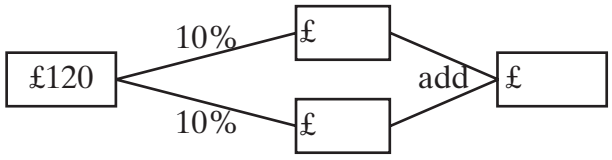
15% of £60

11



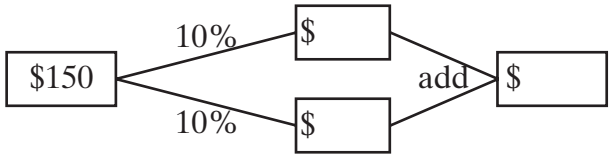
15% of £80

12



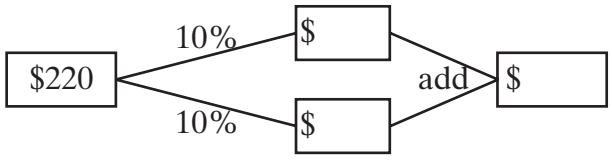
20% of £120

13



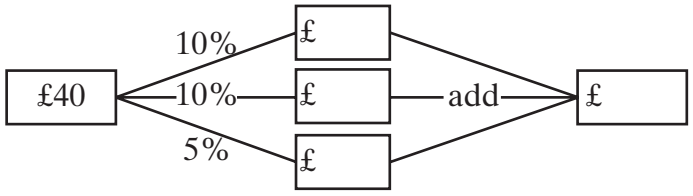
20% of $150

14



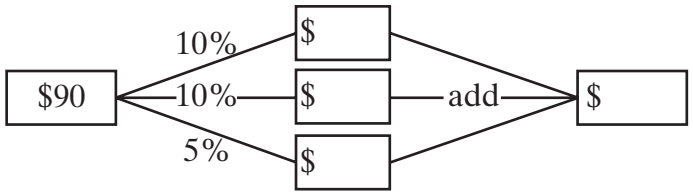
20% of $220

15



25% of £40

16



25% of $90

You should now be able to use this method in other types of questions.