

Canonbury Home Learning

Year 6 Maths

Developing/ Expected/ Greater depth activity

Lesson 4

LO: TBAT complete a code breaking task using the directions on a compass.

Task: This week you will be trying to solve a murder mystery.

Success Criteria:

1. Read the task.
2. Use north, east, south or west to find the appropriate letters for the next clue.

Finding Percentages of Amounts

The word percent comes from the Latin words **per** and **cent** meaning 'out of every 100'. The symbol for percent is %.

28%	11%	79%

Use one of these methods to find a percentage of an amount.

Convert to a Decimal	Finding 10%	Finding 1%
Find 30% of 80	Find 70% of 60	Find 18% of 250
1. Convert the percentage into a decimal. $30 \div 100 = 0.3$	1. Find 10% by dividing the amount by 10. $60 \div 10 = 6$	1. Find 1% by dividing the amount by 100. $250 \div 100 = 2.5$
2. Multiply the amount by the decimal. $80 \times 0.3 = 24$	2. Multiply this answer by the number of tens in the percentage. $6 \times 7 = 42$	2. Multiply this answer by the number of the percentage. $2.5 \times 18 = 45$
30% of 80 = 24	70% of 60 = 42	18% of 250 = 45

Co-ordinates in the 4 Quadrants

Warning! This work involves negative numbers. Remember to follow the same rules for creating co-ordinates – x before y.

1st Quadrant
If both co-ordinates are positive numbers, it will fall in here.
(4,3)

2nd Quadrant
If the first co-ordinate is negative and the second co-ordinate is positive, it will fall in here.
(-4,3)

3rd Quadrant
If both co-ordinates are negative numbers, it will fall in here.
(-4,-3)

4th Quadrant
If the first co-ordinate is positive and the second co-ordinate is negative, it will fall in here.
(4,-3)

Can you work out what the co-ordinates are for each of the 4 letters?

www.twinkl.co.uk

Task 1

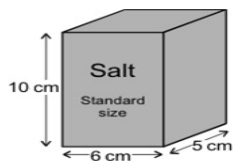
Problem solving

Use percentages to solve the following questions.

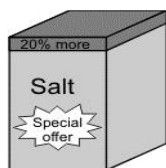
Q1.

Salt

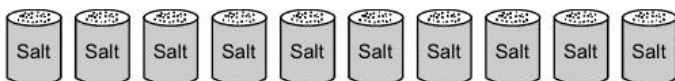
(a) What is the volume of this **standard size** box of salt?



(b) What is the volume of this **special offer** box of salt, which is **20% bigger**?



The **standard size** box contains enough salt to fill up **10** salt pots



(c) How many salt pots may be filled up from the **special offer** box of salt?

Q2.

Grace made purple paint by mixing three colours.
50% was red.
30% was blue
and the rest was white.

What percentage of the purple paint was white?

Task 2

Arithmetic

9	$-8 - 5 =$
10	$36 + 22 \times 4 =$
11	$60 \times 90 - 80 =$
12	$48,000 \div 80 =$
13	$91.37 \times 6 =$
14	$94.37 + 8.184 =$
15	$99,999 \div 50 =$

Task 3

Project

Murder mystery

Murder Mystery 1



The police are called to a health spa. Lying on the floor is the body of a murdered guest. As police search the spa, they find 5 clues written down by witnesses. They have sent the clues to you to decipher.

They also provide a list of all those present at the health spa when the murder was committed.

There are 32 suspects. Each clue will eliminate half the number of suspects remaining. When all clues have been solved the identity of the murderer will be revealed.



Task below.

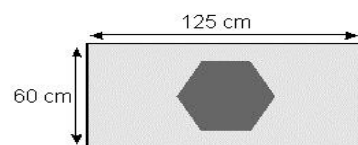
The Suspects

Forename	Surname	Sex	Right / left	Usually wears hat	Hair	Driver ?	Guilty
Coutney	Brown	F	Right	Yes	Dark	No	
Sarah	Perkins	F	Right	Yes	Fair	No	
Callum	Rogers	M	Right	Yes	Dark	No	
Simon	Temple	M	Left	No	Dark	Yes	
Greta	Harrup	F	Right	No	Dark	Yes	
Sally	Fisher	F	Left	No	Fair	No	
Frank	Beech	M	Left	Yes	Red	Yes	
Chelsea	Bridges	F	Left	Yes	Red	Yes	
Orla	Smith	F	Right	No	Red	Yes	
Tim	Garner	M	Right	No	Red	Yes	
Ruth	Jameson	F	Left	Yes	Dark	Yes	
Mark	Hitchkins	M	Right	Yes	Dark	Yes	
Carol	Smithkins	F	Left	Yes	Dark	No	
India	Jones	F	Left	No	Dark	No	
Tom	Walker	M	Right	No	Dark	Yes	
Charlotte	Twiddle	F	Left	Yes	Fair	No	
Chardonay	Hogg	F	Right	Yes	Dark	Yes	
Abdirahman	Mustafa	M	Left	Yes	Fair	No	
Becky	Sands	F	Right	No	Fair	No	
James	Wren	M	Left	Yes	Dark	Yes	
Saskia	Riggles	F	Right	No	Dark	No	
Harry	Pitcher	M	Right	No	Fair	No	
Jack	Turnip	M	Right	No	Dark	No	
Jake	Griggle	M	Left	No	Red	Yes	
Fiona	Gibson	F	Left	No	Dark	Yes	
Faisal	Iqbal	M	Right	Yes	Red	Yes	
Sam	Sprat	M	Right	Yes	Fair	No	
Ian	Dent	M	Left	No	Fair	No	
Jim	Begler	M	Left	Yes	Dark	No	
Amina	Khan	F	Left	No	Red	Yes	
Gavin	Redrup	M	Left	No	Dark	No	
Beth	Walters	F	Right	Yes	Red	Yes	

Canonbury Home Learning

Q3.

Here is a flag.



What is the **area** of **this flag**?

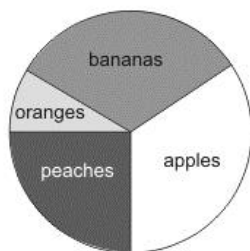
20% of the flag is blue.

What **area** of the flag is **blue**?

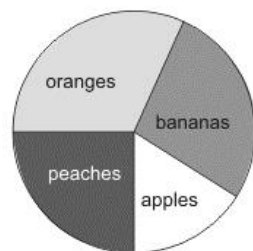
Q4.

Some children work out how much money two shopkeepers get from selling fruit.

They use pie charts to show this.



Mrs Binns



Mr Adams

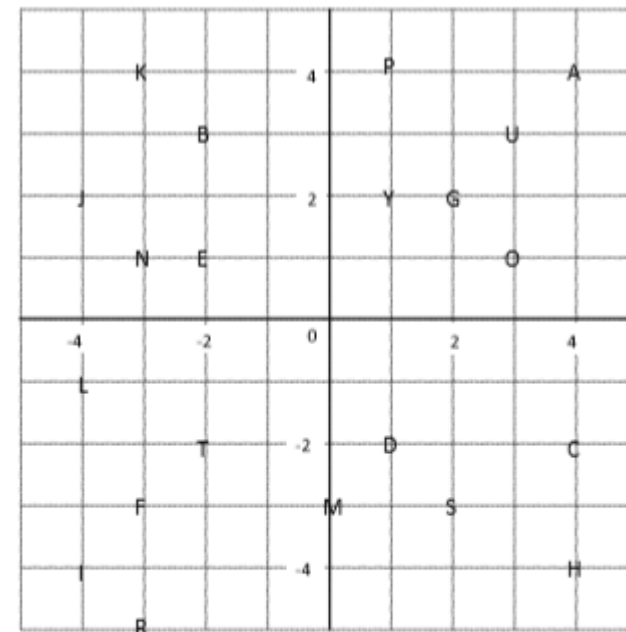
Mrs Binns gets **£350** selling **bananas**.

Estimate how much she gets selling **oranges**.

Mrs Binns gets a total of £1000 and Mr Adams gets a total of £800

Estimate how much **more** Mrs Binns gets than Mr Adams for selling **peaches**.

Clue 4 – It's time to co-ordinate your investigation.



(0,-3) (3,3) (-3,-5) (1,-2) (-2,1) (-3,-5) (-2,1) (-3,-5) (1,-2)

(-3,-5) (3,1) (5,2) (-2,1)(3,1) (-3,-3) (-3,-3) (-4,-4) (-3,1) (4,4)

(-3,-5) (-2,1) (1,-2) (4,-2) (4,4) (-3,-5)