Revision Booklet

Functional Skills Level 1
January-February

QUESTIONS TO GO WITH YOUR LESSONS

Name:

Vocational Course:

Contents

1) Work out 3400 ÷ 1000

(1)

2) Mick is starting a course at college.
In the first week he will go to college Monday to Friday.
Mick has a total of £12 to spend on lunch this week.

He wants to spend £2.35 each day on lunch.

Can Mick afford to spend £2.35 on lunch each day in this week?

(2)

3) Donna is raising money to build a new village hall.

People can have their name printed on a brick for the hall.
Each person pays £28 for a brick with their name on it.

Donna hopes to raise £12000 by selling bricks.
She thinks she will need to sell 420 bricks to reach her target of £12000.

Are 420 bricks enough to reach her target?

(3)

4) Claire wants to give her hair stylists a pay rise.
She will give them a pay rise if their mean average profit over the last 6 months is more than £5000.

The table shows the profit each month for the last 6 months.

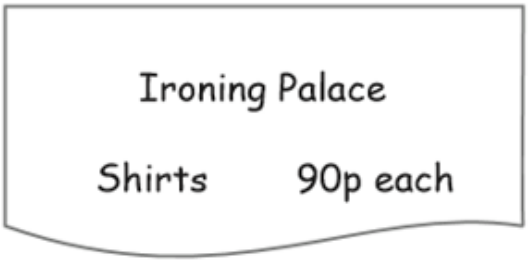
Month	January	February	March	April	May	June
Profit	3580	4810	4320	5460	5120	6860

Will Claire give her stylists a pay rise?
Show a check of your working.

(4)

5) Gordon irons some shirts for staff at a hotel.
The total weight of these shirts is 9.5kg.
Each shirt weighs 190g.

Gordon charges £38 to iron these shirts
He sees this advert for ironing in the local newspaper.



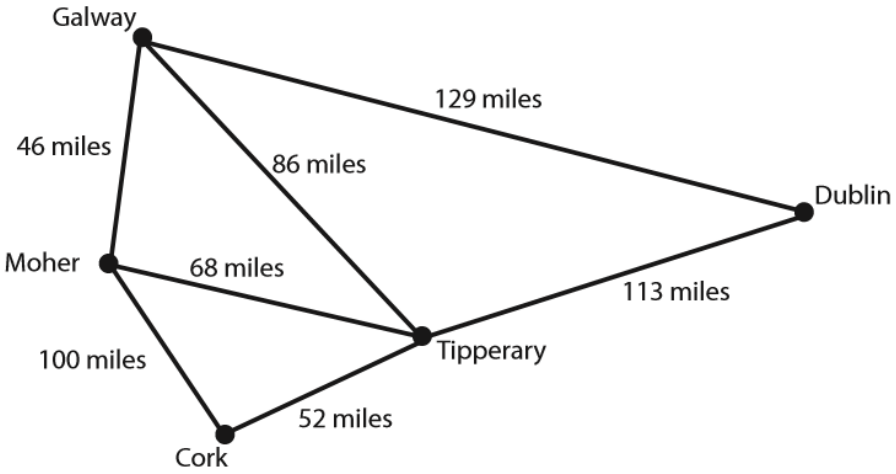
Gordon thinks he charges less to iron these shirts than the ironing Palace would charge.

Is Gordon correct.
Show why you think this.

(4)

6) Clive is planning a trip from Cork to Dublin.
He will stop in Tipperary, Galway and Moher on his way to Dublin.

Clive does not mind in which order he stops at each of the three places.
He draws this sketch of the places and the distances between them.



Clive wants to plan a route for his trip.

Plan the route for Clive.
What is the total distance of this route?

(3)

7) Dave is a college student.
He works at a leisure centre in the summer holidays.
Dave earns £6.70 for each hour he works.
The table shows the hours he worked in July.

Week	1	2	3	4
Hours Worked	30	32	35	23

Dave thinks he has earned more than £750 in July.

Did Dave earn more than £750 in July.
Show a check of your working.

(4)

8) Jane works at a supermarket in her summer holidays.
She earns:

- £6.10 per hour for the first 27 hours she works each week.
- £7.60 per hour for any extra hours she works.

Last week Jane worked 35 hours.

She thinks her pay will be £250 for last week.

Is Jane Correct?

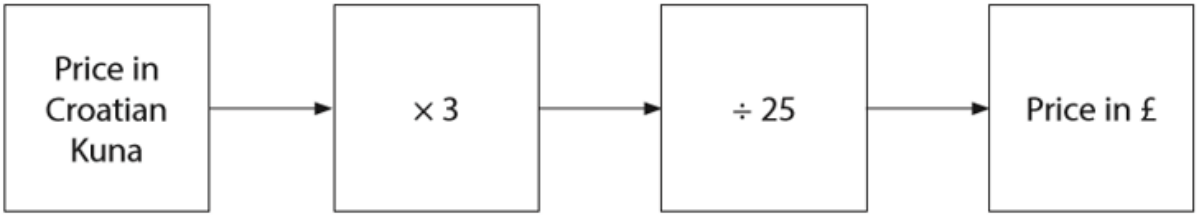
Show why you think this.

(4)

9) Winston wants to go on a boat trip.
He sees these offers for a half day boat trip.

Offer A	**Offer B**
Boat trip	Boat trip
£26.50	230 Croatian Kuna

Winston knows this rule to convert from Croation Kuna to £.



Winston wants to know which offer is cheaper.

Which offer is cheaper?

(3)

1) a) Work out the difference between – 3°C and 4°C.

(1)

b) At 5am the temperature is –6°C.
By 2pm the temperature went up by 9°C.
From 2pm to 11pm the temperature went down by 15°C.

Work out the temperature at 11pm.

(2)

2) Fiona is playing a game.
She throws 8 balls at a target, one at a time.
Each hit is worth 5 points.
Each miss is worth –3 points.

Fiona hits the target with 5 of the balls and misses with the rest.

a) How many points does Fiona score?

(2)

b) Chris throws 9 balls at the target, one at a time. Is it possible for Chris to score the same number of points as Fiona?

(3)

3) Work out

a) 4 x (3 + 17)

(1)

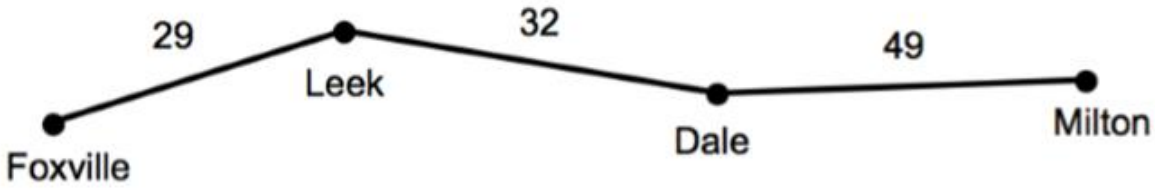
b) 10 – 2 x 5

(1)

c) 30 – 5 x 2

(1)

4) The distance, in miles, between four towns are shown on the map.



a) Work out the distance between Leek and Milton.

(2)

b) Work out the distance between Foxville and Milton.

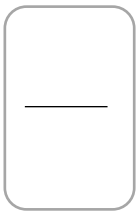
(2)

5) Timothy saves £34 a week.
Calculate how much money Timothy will save in a year.

(2)

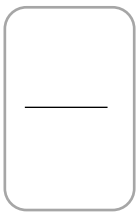
1) Simplify

(a) $\frac{4}{10}$



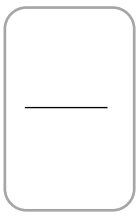
(1)

(b) $\frac{9}{15}$



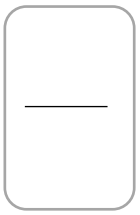
(1)

(c) $\frac{15}{20}$



(1)

(d) $\frac{20}{100}$



(1)

2) Find the missing numbers

(a) $\frac{3}{4} = \frac{\quad}{16}$

Write the missing number in the box below. (1)

(b) $\frac{\quad}{5} = \frac{6}{15}$

Write the missing number in the box below. (1)

(c) $\frac{7}{8} = \frac{35}{\quad}$

Write the missing number in the box below. (1)

(d) $\frac{2}{\quad} = \frac{16}{40}$

Write the missing number in the box below. (1)

3) Here are some fractions.

$$\frac{2}{4} \quad \frac{3}{7} \quad \frac{5}{9} \quad \frac{9}{18} \quad \frac{10}{22}$$

Which two fractions are equivalent to $\frac{1}{2}$? (2)

4) Write these fractions in order, starting with the smallest.

$$\frac{2}{3} \quad \frac{11}{15} \quad \frac{7}{15} \quad \frac{3}{5}$$

Show your working and write your answer in the box below. (2)

5) Write these fractions in order, starting with the smallest.

$$\frac{13}{16} \quad \frac{3}{4} \quad \frac{5}{8} \quad \frac{11}{16}$$

Show your working and write your answer in the box below. (2)

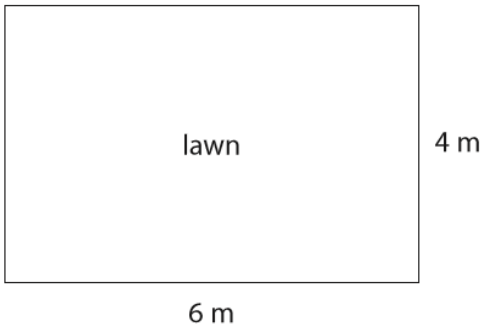
6) Write these fractions in order, starting with the largest.

$$\frac{1}{4} \quad \frac{3}{8} \quad \frac{1}{6} \quad \frac{5}{12}$$

Show your working and write your answer in the box below. (2)

7) Jane has a lawn in front of her house.

The lawn is in the shape of a rectangle 6 m by 4 m.



Jane buys one box of lawn feed.
One box is enough for 100 m^2 of lawn.

Janes says, “My lawn needs ¼ of this box.”

Will ¼ of this box be enough for the lawn?

Use the box below to show clearly how you get your answer. (4)

8) Robyn is going to do a 24 mile walk for charity.
She asks people to sponsor her.

Robyn does not finish the walk.

She says to Anita, "You said you would give me £48 to walk 24 miles.
I only walked for ¾ of this distance, so you only need to give me £32."

Does ¾ of 48 equal 32?
Show a check of you working.

Use the box below to show clearly how you get your answer. (4)

Check

1) Round each of these numbers to two decimal places.

a) 3.4836 (1)

b) 20.4569 (1)

2) Round each of these numbers to one decimal place.

a) 3.4836 (1)

b) 20.4569 (1)

3) Round these numbers to the given number of decimal places.

a) 45.796 to 2 decimal places (1)

b) 2.971 to 1 decimal place (1)

4) Round each of these numbers to the nearest whole number.

a) 51.0684 (1)

b) 5.847 (1)

5) The highest temperature recorded in a town is 35.3 ^{o}C.
Round this temperature to the nearest degree. (1)

6) Use rounding to estimate the answers to these calculations:

a) 31 + 98 + 1001 = (1)

b) 41 x 2.1 = (1)

c) (199 – 59) ÷ 6.9 = (2)

7) The box below shows the amount Jacqueline spends each month on bills.

Estimate the total amount that Jacqueline spends each month on bills (3)

Gas	£30.10
Electricity	£29.99
Internet	£10.05
Water	£19.80
Council tax	£104.43

Use the box below to show clearly how to get your answer.

8) Lola is making fruit cakes to sell at a bake sale.
She uses two recipes that require different amounts of flour.

Recipe A	**Recipe B**
1.98 kg of flour	0.495 kg of flour

She makes three cakes using **Recipe A** and two cakes using **Recipe B**.

Estimate how much flour she used in total.

(3)

Use the box below to show clearly how to get your answer.

1) A drink of orange uses a mixture of 1 part squash to 4 parts water. A large birthday party requires 20 Litres of the orange drink to be made.

Jenny wants to buy the orange juice from the shop in one go. She thinks she needs to spend over £5 on squash.

3x 1L Bottles £2.40

Show if Jenny is correct.

(4)

2) Some mobile phone sizes are shown below as per a shop item list.

 phone A	20Gb	7cm x 14cm	£450
 phone B	12Gb	8cm x 20cm	£500
 phone C	17Gb	6cm x 13cm	£370
 phone D	20Gb	7cm x 21cm	£600
 phone E	15Gb	8cm x 15cm	£650

Bill would like to choose a phone that has a width to length ratio of 1 : 2.5
Which phone should he choose?

Show your workings (2)

3) A cake recipe shown below has missing values in its table of ingredients for various quantities of cake produced. Complete the table with the missing values.

	Eggs	Sugar	Flour	Milk
4 persons	6	200g	300g	
6 persons		300g		75ml

4) A mixture of paint is used for Tim's flat. To get the colour correct he needs to mix Blue and Yellow paint in the ratio 1 Blue to 3 Yellow.

Shown are the tins of paint Tim can buy.

Blue Paint

1 Tin = 5 Litres

£12.00

Yellow Paint

1 Tin =7 Litres

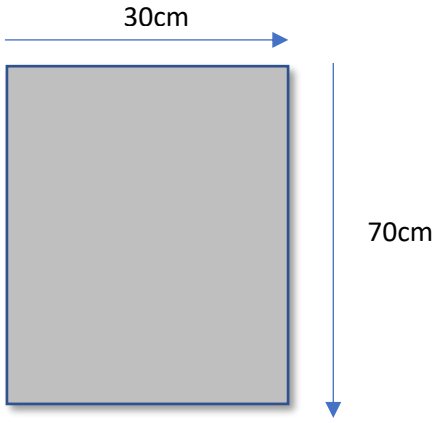
£14.00

Tim works out he will need 16L of the blue/yellow mixture to cover all the walls.

Work out the total cost of Tim's painting job, show all your workings. (4)

5) A family photo is increased in size so that each length is 1:4 bigger than its original size.

The dimensions of the enlarged photo are shown below.



Amit keeps the original photo and places the larger on her wall. She thinks that the original smaller photo can fit into a frame 7cm x 15cm.

Show if she is correct. (2)

6) At a gym a record is kept of members starting and finishing weights after a time period to compare their weight lost. All members are attempting to lose weight in a ratio of 6kg : 5kg from their starting weight to finishing weight.

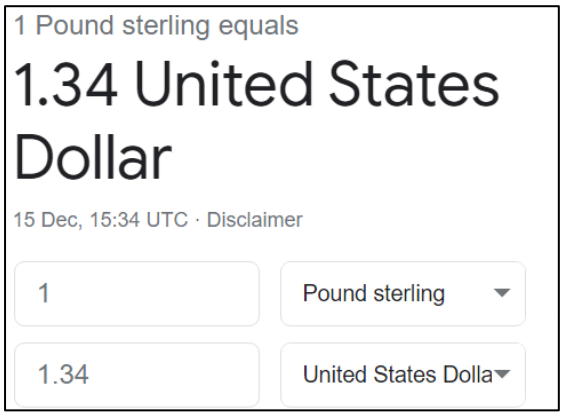
	Member 1007	Member 1009	Member 1024	Member 1035	Member 1044
Starting Weight	85kg	90kg	102kg	95kg	97kg
Finishing Weight	80kg	75kg	91kg	82kg	92kg

Only one member has achieved this weight loss.

Find the member number and show how you have calculated that this member has lost the correct weight in a ratio of 6:5

(2)

7) Steve would like to exchange £300 into dollars. He is using the current pounds to dollars conversion as shown on his mobile. He thinks he will get at least $400 after paying the exchange rate fee.



Exchange Fee $5.00

Show if he is correct. (4)

8) A tile pattern is used on a floor in a hotel. The tiles are placed in a repeated pattern of 1 square then 2 triangles. One red and one green triangle are cut from whole square tiles.

1 box of yellow square tiles: £2 for 15 tiles
1 box of red square tiles: £3 for 15 tiles
1 box of green square tiles: £3 for 15 tiles

A total of 800 whole tile squares are required to cover the entire hotel floor.

Work out the cost of the tiles for the hotel floor.

1) Veronica and her two children are going to visit a skyscraper called SkyPoint.
The children are aged 8 and 10.

Veronica plans to visit SkyPoint on a Thursday with her two children.

She finds these ticket prices.

	Price on the day (Mon-Fri)	Price on the day (Sat and Sun)	Price online (Mon-Sun)
Adult	£31	£35	£25.95
Student	£26	£30	£20.95
Child (aged 4-15)	£24	£28	£19.95

Veronica wants to know the total amount she will save if she buys tickets online instead of on the day of the visit.

How much will Veronica save in total if she buys the tickets online?

(4)

Use the space below to show clearly how you get your answer

2) Mr Khan is the manager of The Palace.
He records the number of hours each person worked last week.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Tom	4.5	day off	4.5	day off	4	4.5	5
Des	day off	4.5	4	4.5	5	5	day off
Jenny	5	4.5	day off	5	4.5	4.5	5
Lee	4	4.5	5	4.5	day off	4	5
Mahir	4	day off	5	4.5	day off	4	4.5
Liz	Day off	5	5	4.5	4.5	day off	4

Mahir is paid an hourly rate of £7.85.

a. How much is Mahir paid for working last week?
Show a check of your working

Use the space below to show clearly how you get your answer.

3) Fez needs to buy a rope for the tug-of-war event.
Each metre of rope costs £2.75

Fez needs to have one rubber grip put on each end of the rope.
It costs £7.50 to put a rubber grip on one end of a rope.

Fez wants to buy a rope that is 34 metres long with rubber grips at both ends.
He has a budget of £120

a. Is £120 enough to buy this rope with rubber grips?
Show why you think this.

(3)

Use the space below to show clearly how you get your answer.

4) Liz wants to feed the birds in her garden.
She wants to buy 2 bird feeders and 3 bags of bird seed.

Each bird feeder costs £6.95
A bag of seed costs £3.10

Workout the total cost for Liz. (3)

Use the space below to show clearly how you get your answer.

5) Dean Jan and their 2 children are visiting the wildlife centre.
The children are 12 and 5 years old.

Dean sees these admission prices

Admission prices	
Adult	£12.60
Child (age 4-16)	£6
Group ticket (2 adults and 2 children)	£32

Dean thinks it will be cheaper to buy a group ticket for the visit.

Is Dean correct?

Show why you think this. (4)

Use the space below to show clearly how you get your answer.

6) Liz and her family want to join a bird club for a year.

Bird Club Membership	
Adult	£4 per month
Child	£3 per month

Bird Club Family Membership
1 or 2 adults + up to 3 children
£126 per year

Liz and her husband are adults.
Andy is their only child.

They want to choose the cheapest membership deal for their family.

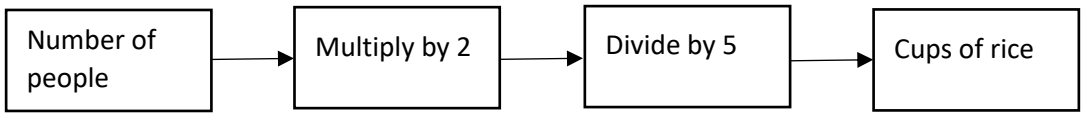
Which membership should they choose?
Show a check for your working. (4)

Use the space below to show clearly how you get your answer.

1) Manda works at a charity for homeless people.

She needs to make lunch for 15 people.

Magda knows this rule to find the amount of rice she needs to cook.



Magda thinks she needs to cook 10 cups of rice for 15 people.

Is Magda correct?

Show why you think this.

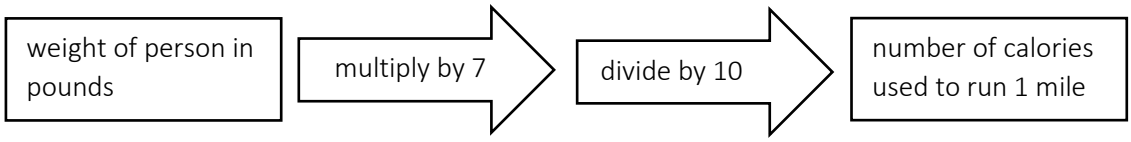
(4)

Show a check of your answer.

2) Donna and her friend Martin are training for a sponsored run.

The sponsored run is 26 miles.

The find this rule to calculate how many calories are used to run 1 mile.



Donna weighs 136 pounds.

Martin weighs 152 pounds.

Martin thinks he will use 300 more calories on the sponsored run than Donna.

Is Martin correct?

(5)

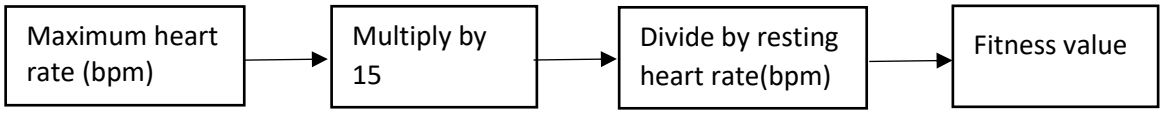
Show why you think this.

3) Mikael plays football.

Mikael wants to know how fit he is.

He measures his heart rate in beats per minute (bpm).

Mikael uses this rule to work out his fitness value.



Mikael has a

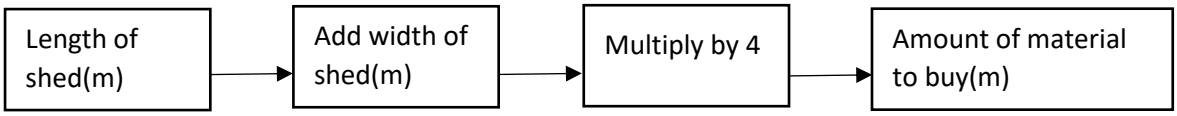
- Maximum heart rate of 192 bpm
- Resting heart rate of 50 bpm.

A footballer should have a fitness value greater than 54.

Does Mikael have a fitness value greater than 54? (3)

4) Tim wants to hang curtains along all 4 walls of the shed.

He uses this formula to work out the amount of material he needs to buy.



The length of the shed is 7.25 m and width is 3.75 m.

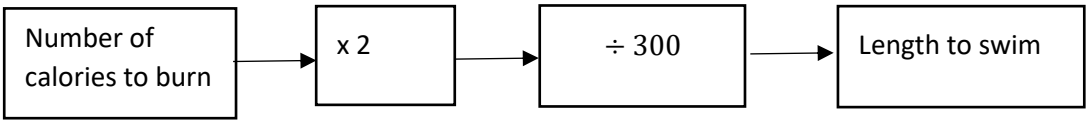
Tim thinks he needs to buy 44 m of material.

Does Tim need to buy 44 m of material?

(3)

5) Jenny goes swimming at the fitness centre to burn calories.

She uses this rule to work out how many lengths of the pool she needs to swim.



Jenny wants to burn 350 calories.

Show that Jenny needs to swim 75 lengths to burn 350 calories.

Use the space below to show clearly how you get your answer.

(3)

6) Don is organising a comedy night for charity.

He is going to sell food at the comedy night.

Here is the price list.

Price List	
Slice of pizza	£2.75
Hot dog	£1.25
Hamburger	£1.95
Sandwich	£2.25
Chips	£1
Cake	£1.45

Don uses these instructions to work out how much money he can expect to make by selling food at the comedy night.

Work out the mean average price of all the items in the price list.

Multiply this mean average price by 80

Don thinks he can expect to make at least £140.

Can Don expect to make at least £140 by selling food at the comedy night? (3)

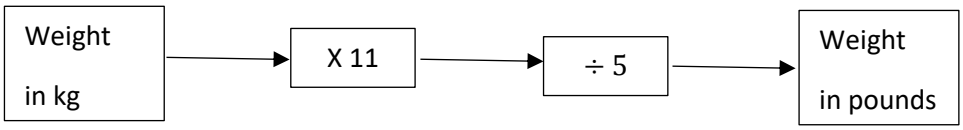
7) Vicky likes this kayak.

It has a weight of 17 kg.

Vicky must be able to lift the kayak.

She knows she can comfortably lift a weight of up to 33 pounds.

Vicky uses this rule to convert between kg and pounds.



Will Vicky be able to comfortably lift the kayak?

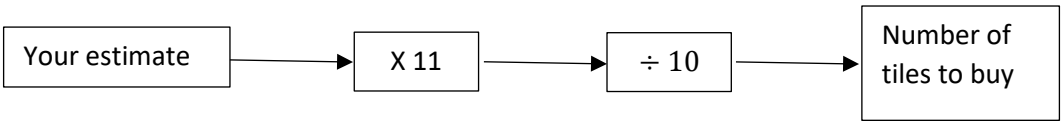
Show a check of your working. (3)

8) Anna wants to buy tiles for her bathroom floor.
She estimates that she needs 32 tiles.

The shop assistant says

'Buy more tiles in case you need extra to cut.'

He gives her this rule.



Anna thinks the rule shows she needs to buy 40 tiles.

Is Anna correct?

Show why you think this.

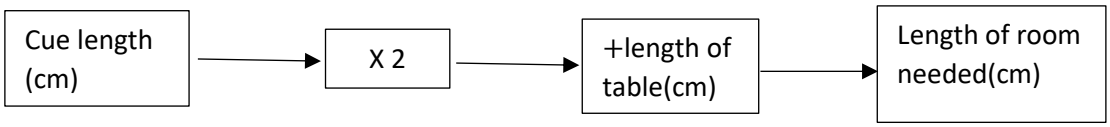
(2)

9) Talyin wants to put a snooker table in a room in his house.

The length of

- The snooker table is 270 cm
- The room is 5.5 m
- The cue Talyin uses to play snooker is 145 cm.

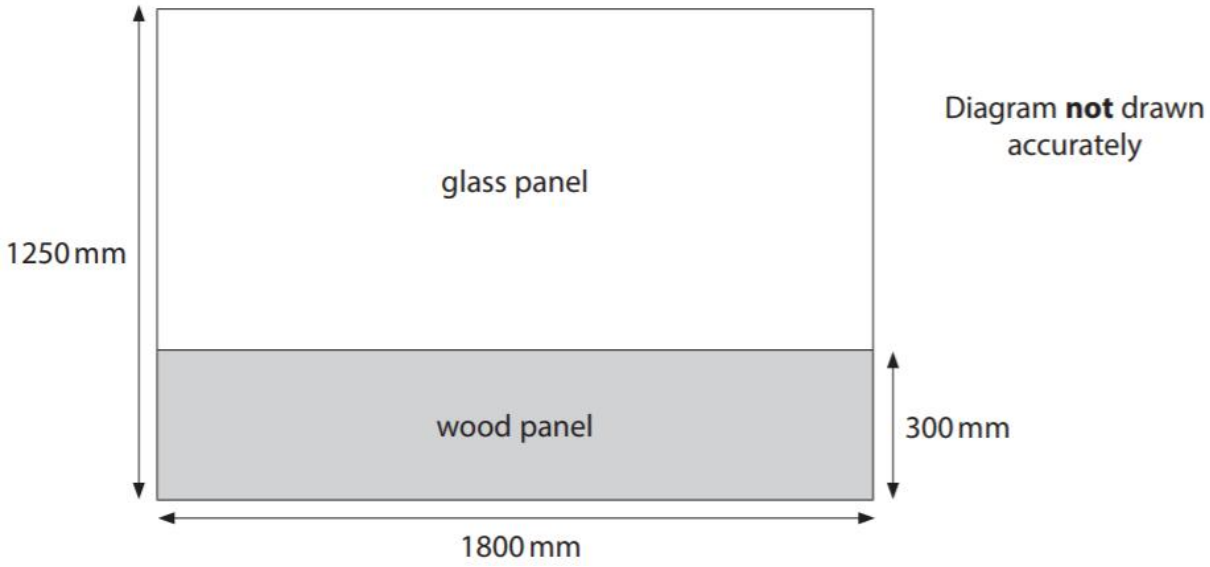
Talyin uses this rule to find out if the length of the room is enough to play snooker.



Is the length of this room enough to play snooker on this table?

(2)

1) Romesh buys a counter for his shop
In the front of the counter, there is a glass panel.



Romesh wants to put a length of lights around all 4 edges of the glass panel.
He can buy lights of length 4m or 6m or 8m.
Romesh wants to buy the shortest length of lights to go around all 4 edges of the glass panel.

Which length of lights should Romesh buy?

Show why you think this. (4)

Use the box below to show clearly how you get your answer.

2) Ruth grows tomatoes.

She expects to get 6kg of tomatoes from one plant.

Ruth uses a recipe to make 5 bowls of soup with 750g of tomatoes.

She works out that the tomatoes from one plant would be enough to make a Total of 45 bowls of this soup.

Is Ruth correct?

Show why you think this. (4)

Use this box below to show clearly how you get your answer.

3) Jessica needs to work out how many seats can fit in the village hall.

She has a diagram of the hall.

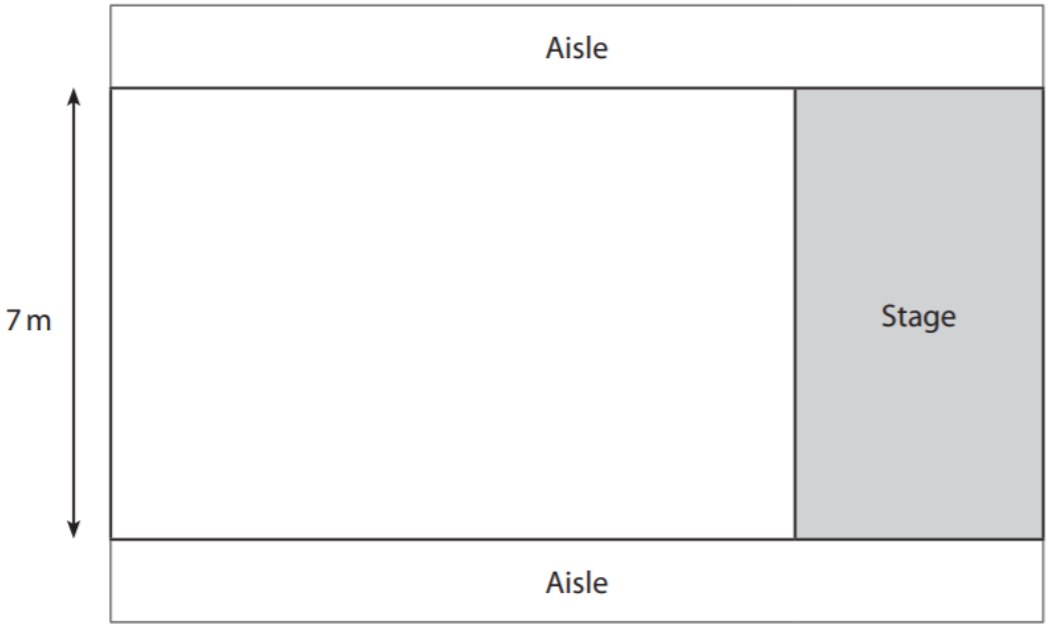


Diagram **not** accurately drawn

Jessica knows they can fit 16 rows of seats in the hall.

Each seat is 500mm wide.

The space between the aisles is 7m

Jessica thinks they can fit 250 seats in the hall.

Is it possible to fit 250 seats in the hall? (4)

4) Kay wants to plan the display in a room.

Each display needs a space of $3m^2$.

Kay has a sketch of the room.

All corners are right angles.

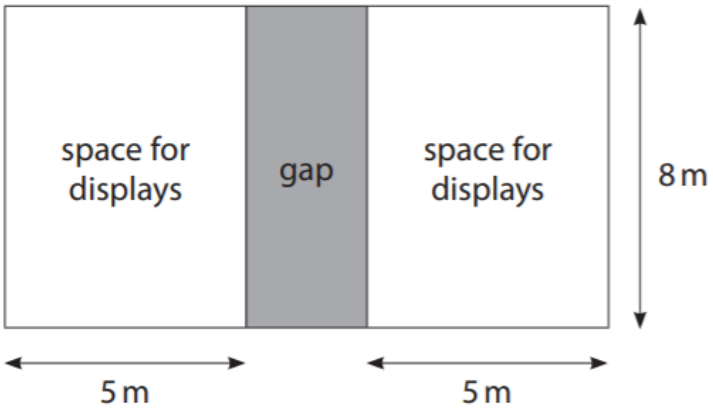


diagram **not** accurately drawn

Kay thinks there is enough space for at least 25 displays.

Is there enough space for at least 25 displays in the room? (4)

Use the box below to show clearly how you get your answer.

1) After activities nine students complete an assessment.

To pass the assessment the students need to get at least 75% of the total marks.
The total mark for this assessment is 140

Tanya scored 108 marks.
Tanya thinks she has passed the assessment.

a. Has Tanya passed the assessment?
Show a check of your working.

(3)

Nine students completed the assessment.

Here are their results.

108 72 96 130 48 65 109 81 129

b. Which calculation will give the range of these results? (1)

Tick (✓) the box to show the calculation.

☐ 129 -108

☐ 129 +108

☐ 129 ÷2

☐ 130 – 48

☐ 130 + 48

2) Donna is raising money to build a new village hall.

People can have their name printed on a brick for the hall.
Each person pays £28 for a brick with their name on.

Donna hopes to raise £12 000 by selling bricks.

She thinks she will need to sell 420 bricks to reach her target of £12 000

a. Are 420 bricks enough to reach her target?

Show a check of your working. (3)

Donna needs some leaflets to advertise the fundraising.

The table below shows the normal prices of leaflets.

Quantity	Black and White (£)	Colour (£)
1000	25.18	37.97
1500	26.39	42.37
2000	37.19	56.38
2500	44.39	65.17
5000	47.99	70.38
10000	92.40	116.39

Donna wants to order 1500 black and white leaflets.

There is a special offer

save 30% of the normal price.

b. How much money will Donna save with the special offer?

Use the space below to show clearly how you get your answer. (3)

Donna is going to collect, sort and deliver some of the leaflets.
She will leave her home at 1pm.

Donna allows

- 15 minutes to collect the leaflets
- 10 minutes to sort the leaflets
- 30 minutes to deliver the leaflets to the local shops
- 1 hour 20 minutes to deliver the leaflets to houses and get home

Donna thinks she will have delivered the leaflets and got home by 3.30 pm.

c. Is Donna correct?

(3)

Show why you think this?

3) Ruth gets paid £160 every two weeks.
She keeps £30 of this amount to pay for household bills.

Ruth thinks that £30 is 20% of £160

a. Is Ruth correct?

Show why you think this. (2)

Ruth works out she can spend a mean average of £3.70 each day.
She writes down what she actually spends on the next 5 days.

Mon	Tue	Wed	Thu	Fri
£2.48	£4.70	£4.66	£0	£5.81

Ruth wants to know if the mean average of the amount she has spent on these 5 days is less than £3.70.

b. Has Ruth spent less than a mean average of £3.70 a day?

Show a check of your answer.

4) Sandro is going to London by train.
He gets a taxi from home to the station.

Sandro knows the taxi driver charges 80 pence for every mile.
The journey from Sandro's home is 9 miles in total.

Sandro thinks this journey will cost £7.50

a. Is Sandro correct?

Show why you think this. (2)

Sandro buys these items at the station.

Packet of crisps	£1.05
Bottle of water	£1.69
Sandwich	£3.49
Cup of Tea	£1.95

Sandro pays with a £10 note.
He gets £1.35 in change.

b. Is this change correct?

Show why you think this. (2)

Sandro sees this poster at the station.

Super Trains

We did 4 732 000 journeys last year

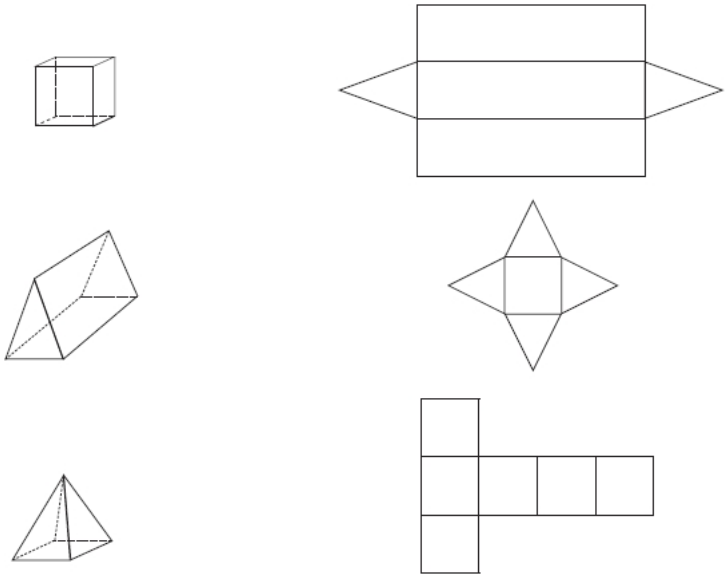
90% were on time

c. What is 90% of 4 732 000?

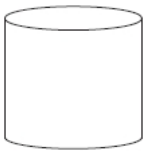
Show a check of your answer. (3)

1)

a. Match each 3-D shape to the correct net.
Draw lines to show your answers. (2)

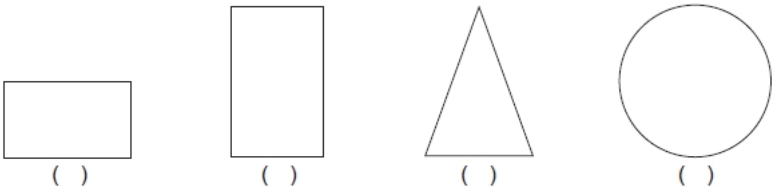


Here is a cylinder



b. Which one of the shapes below could be the plan view of this cylinder?

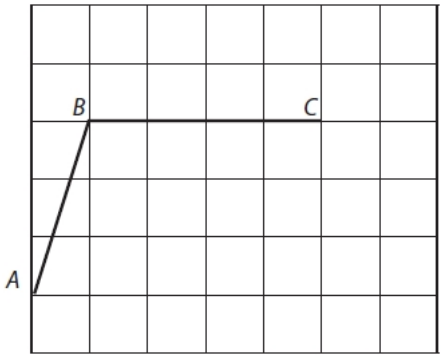
Tick the correct shape. (1)



( ) ( ) ( ) ( )

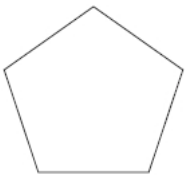
2) Karen is a cake designer
She is designing different shaped cakes.

AB and *BC* are two sides of a parallelogram.



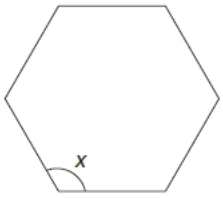
a. On the grid, complete the parallelogram. (1)

Here is a regular pentagon.



b. Draw all the lines of symmetry on this pentagon. (1)

Here is a regular hexagon.



c. What type of angle is angle *x*?

Tick the correct answer. (1)

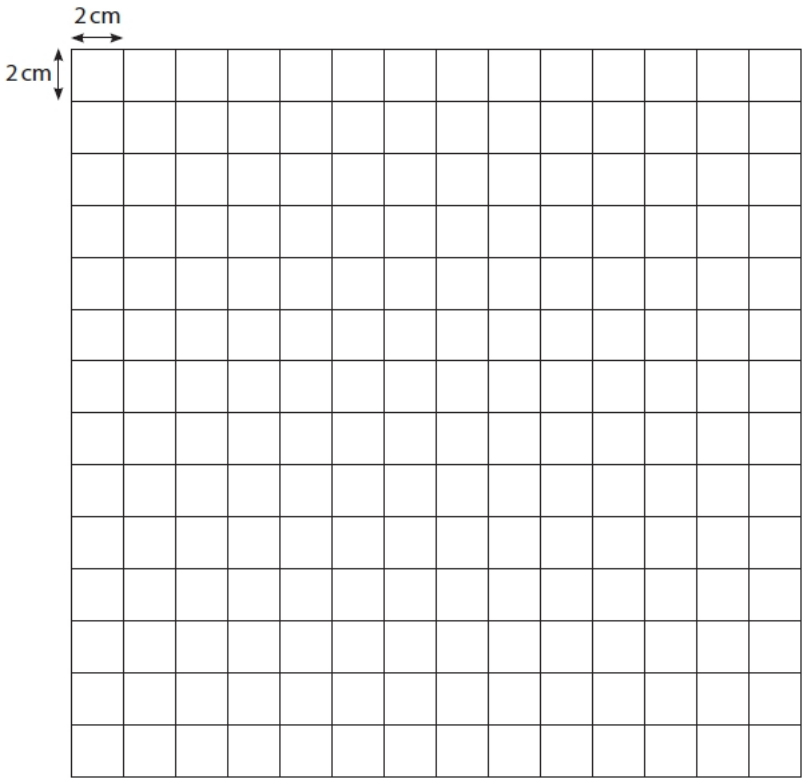
right angle	acute angle	reflex angle	obtuse angle

Karen is making a birthday cake.

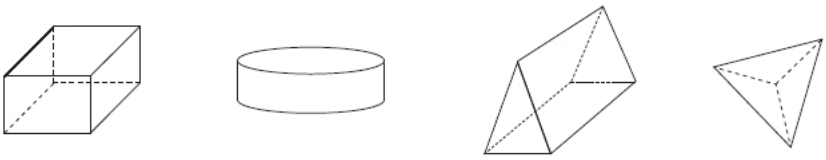
The top of the cake needs to be triangular with one side length 10 cm, one side length 12 cm and a 90° angle between these sides.

d. Draw the top of the cake for Karen.

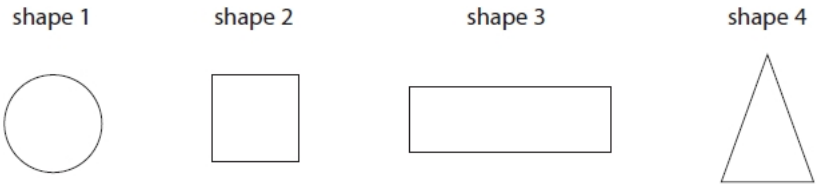
Use the grid below to draw the top of the cake.



3) Josh is designing gift boxes.
He designs these boxes.



Josh needs to know the shape of the boxes from different views.



Place the correct numbers in the space to complete the sentences.

a. Shape ..... is the plan view of the cylinder.

(1)

b. Shape .....is the front view of the triangular prism.

(1)

c. The triangular based pyramid has ..... faces,

..... edges and..... vertices.

(1)

4) Chris is designing a badge.

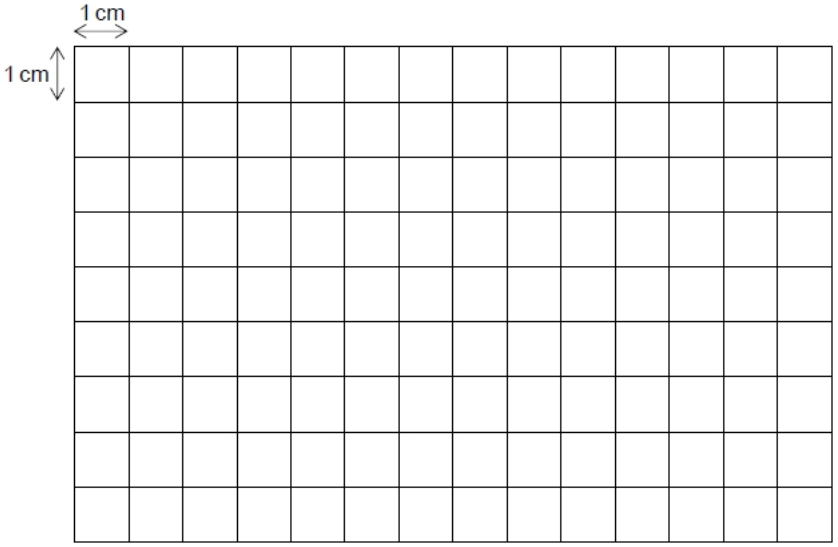
The badge needs to

- be in the shape of a trapezium
- have a base of length 6cm
- have only one line of symmetry

Draw a suitable badge.

Use the grid below to draw a badge.

(3)



5) Gordon buys a new slide for his garden.

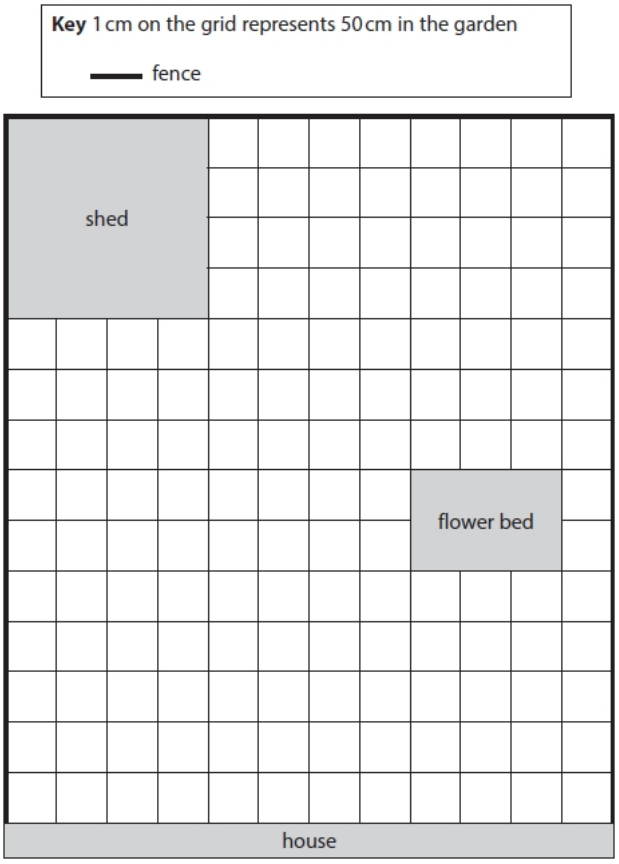
His garden measures 6 m by 7 m.

The space for the slide must be

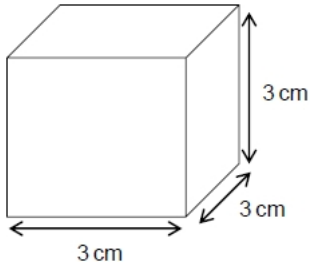
- a rectangle, 3 m by 1.5 m
- at least 2 m away from the house
- at least 0.5 m away from a fence or any other feature

Draw a space for the slide on the square grid below.

(3)



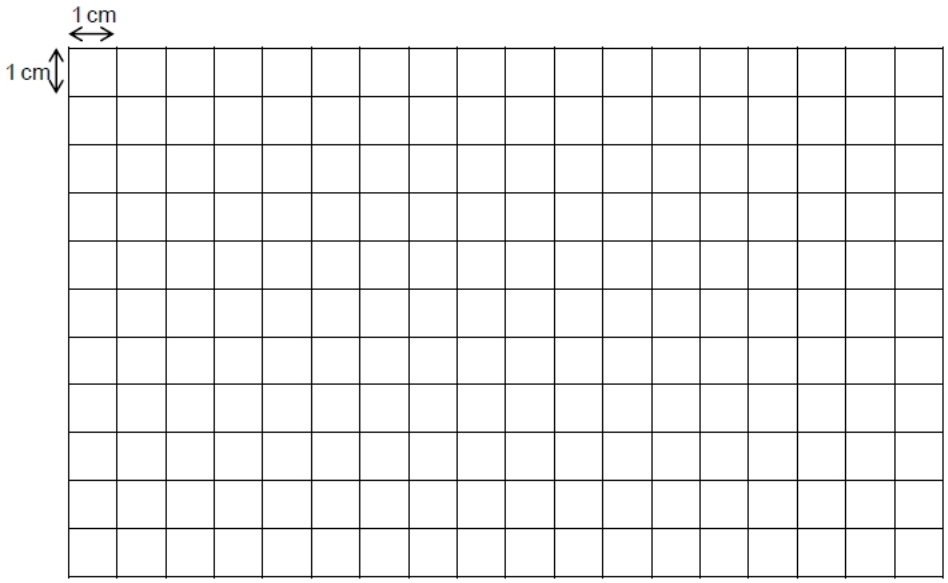
6) Here is a cube of side length 3 cm.



Draw a net of the cube.

Use the grid below to draw your net.

(3)



Revision Booklet

Functional Skills Level 1
January-February

QUESTIONS TO GO WITH YOUR LESSONS

Name:

Vocational Course: