

**A3 Unit 3 - Homework 14**  
**Four Rules (2)**

Name:

Class:

Mark:

1. 10 people go out for a meal. The total bill for the meal is £231.

How much is this for each person?

2. The cost of entry to the Home Show was £6.50 for adults and £4.50 for children.

How much would it cost Barry to take his wife and 2 children?

3. Linda is going to the 'Don't Get Fat' club to try to lose some weight. Her starting weight is 56.4kg.

This table shows her progress card for the first few weeks:



Week Number	Lost	Gained	Weight
1	2.3kg		
2	1.6kg		
3		0.4kg	
4	0.9kg		



4. Anna gets paid £16 464 each year and gets it in 12 equal amounts.

How much does she get each time?

5. Steven is tiling his kitchen and needs 435 tiles.

The tiles come in boxes of 25.

(a) How many boxes of tiles would he need?

(b) How many tiles would Steven have left over?

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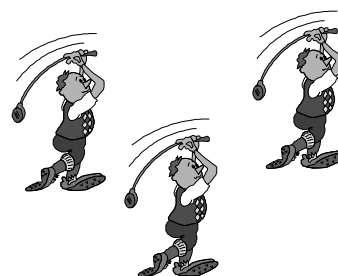
6. David wants a new bike that costs £216.

His Mum gives him  $\frac{1}{2}$  of the money and he saves up the rest from his paper round. If he manages to save £9 a week, how many weeks will it take him to get his bike?




7. At the seaside three friends have a game of crazy golf. Here are their scores:

Hole Number	1	2	3	4	5	6	7	8	9
<b>Polly</b>	3	5	4	7	1	3	3	3	4
<b>Wally</b>	2	4	6	8	2	3	2	4	1
<b>Doodle</b>	3	5	1	4	4	5	6	3	6



Add up each person's score:

Polly:

Wally:

Doodle:

Who won the game?

8. Here are the prices of several items in 'Toots the Chemist'.

Shampoo: £2.35  
 Deodorant: £1.87  
 Shower Gel: £2.75  
 Shaving Foam: £2.24  
 Toothpaste: £0.97  
 Handwash: £1.24

(a) Adrian buys shampoo, deodorant and toothpaste.

How much does it cost him altogether?

(b) The next week there is a special offer:

**Buy 3 items and get the cheapest one free!**

How much would the same three items have cost Adrian now?

A3 Unit 3 - Homework 15  
Fractions

Name:

Class:

Mark:

1. Work out the answers to:

(a)  $\frac{1}{2}$  of 420 cm

(b)  $\frac{1}{4}$  of 3320 ml

(c)  $\frac{1}{6}$  of £564

2. In Killiber High School there are 252 pupils in third year. On the last day of term only  $\frac{1}{7}$  of them were in school.

(a) How **many** pupils were at school?

(b) How many were absent?

3. A film lasts for 2hrs and 30mins. After I had watched  $\frac{1}{5}$  of it I fell asleep. How many **minutes** of the it did I see before I fell asleep?

4. On  $\frac{1}{6}$  of the days in June this year there was some rain.

On how many days was it completely dry?



5. In the course of a day most of us spend  $\frac{1}{3}$  of it asleep.  
For how many hours each day are we awake?

6. There are 40 sweets in a packet.  $\frac{3}{4}$  of them are citrus flavours.

How many citrus sweets are there in the packet?

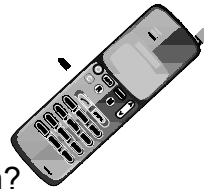
7. In a class of 24 pupils  $\frac{2}{3}$  of them are present.

- (a) How many pupils are present?  
(b) How many are absent?

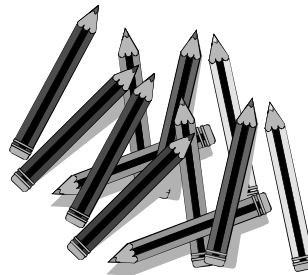
8. In a school there are 1450 pupils.  $\frac{4}{5}$  of them bring a mobile phone to school.

- (a) How many pupils bring a mobile phone?  
(b) How many do not bring a phone with them?

9. In a box of 36 chocolates,  $\frac{4}{9}$  of them are milk chocolate,  $\frac{1}{3}$  of them are white chocolate and the rest are dark chocolate.

- (a) How many are milk chocolate?  
(b) How many are white chocolate?  
(c) How many are dark chocolate?

10. There are 100 pencils in a box.  $\frac{3}{5}$  of them are plain.  $\frac{3}{8}$  of the remainder have rubber tips and the rest are coloured.

- (a) How many plain pencils are there?  
(b) How many rubber-tipped pencils are there?  
(c) How many coloured pencils are there?

A3 Unit 3 - Homework 16  
Percentages

Name:

Class:

Mark:

1. Find: (a) 25% of 40                      (b) 10% of 780                      (c) 20% of 55

2. In a quiz there were 60 questions altogether:

Team A answered 20% of the questions correctly  
Team B answered 25% of the questions correctly  
Team C answered 50% of the questions correctly



How **many** questions did each team answer correctly?

A	

B	

C	

3. 75% of the pupils in a school do not attend on the last day before a holiday. If there are 1600 pupils in the school, how many do not attend on the last day?

4. Find the following amounts:

(a) 45% of £450

(b) 23% of £236

(c) 78% of £890

5. During a period of 55 minutes a pupil spent 15% of the time daydreaming. How many minutes is this?

6. A packet of crisps weighs 30g. Special offer packs give 40% extra free. What weight of crisps do you get extra?

7. Susan was buying a new computer. She had to pay a deposit of 30%. How much deposit would have to pay if her computer was going to cost £900?

8. In a sale, a bike which normally costs £290 is being offered with a 24% discount. How much discount is this?



9. The local sports shop is having a sale and offering the reductions shown in the diagrams. Calculate the 'sale' price of each item.

(a)



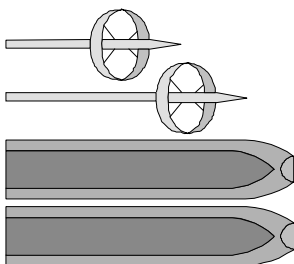
Badminton Racquet:	£30
Discount:	20%

(b)



Ice Skates:	£45
Discount:	10%

(c)



Skis:	£256
Discount:	25%

## A3 Unit 3 - Homework 17 Charts

Name:

Class:

Mark:

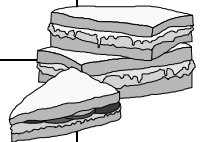
1. Pupils using the school café were asked what kind of sandwich they liked best. Here are the results:

Savoury Cheese: 44  
Tuna Mayonnaise: 32  
Cold Meat: 20

Use a symbol of your choice and draw a pictograph to illustrate the information.

Make 1 symbol represent 4 people.

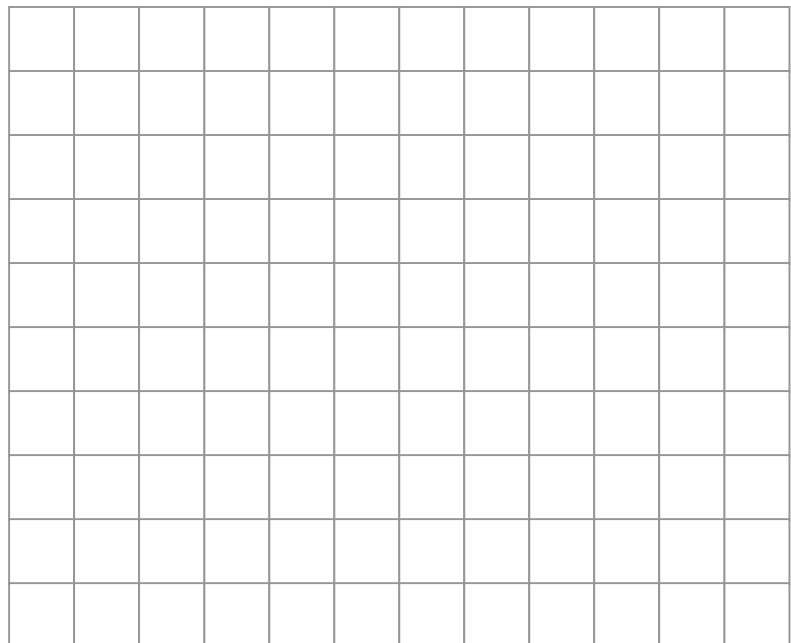
Type of Sandwich	
Cheese Savoury	
Tuna Mayonnaise	
Cold Meat	



2. Here are the hobbies enjoyed by a group of 6<sup>th</sup> year students:

Computing: 20  
Cinema: 26  
Reading: 24  
Music: 36  
Television: 34

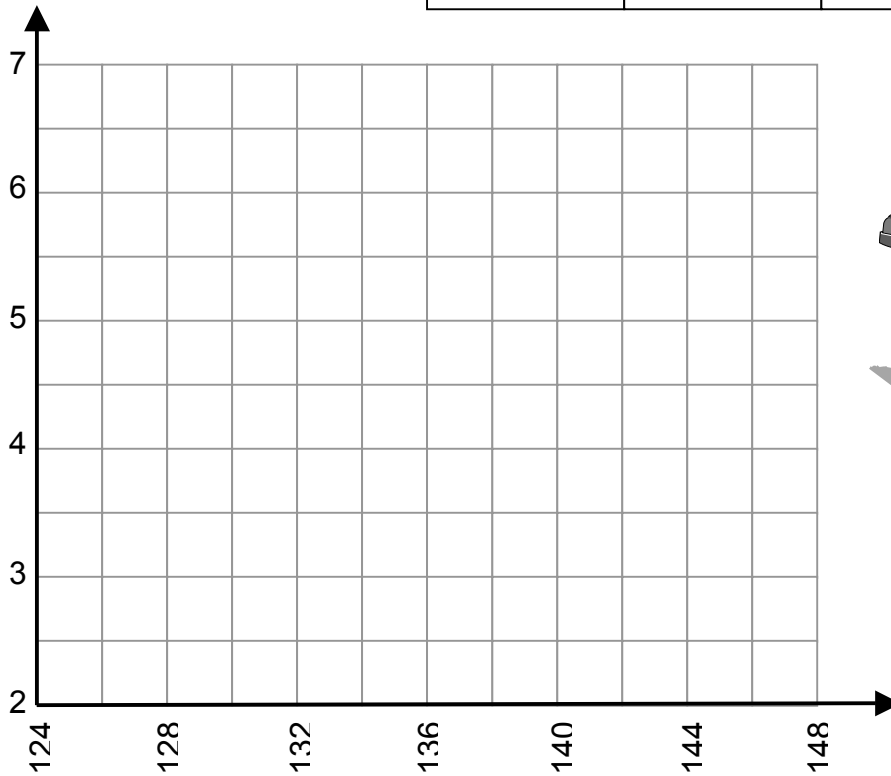
Draw a bar chart on this grid to illustrate the information.



Remember to add a title, a label and scales.

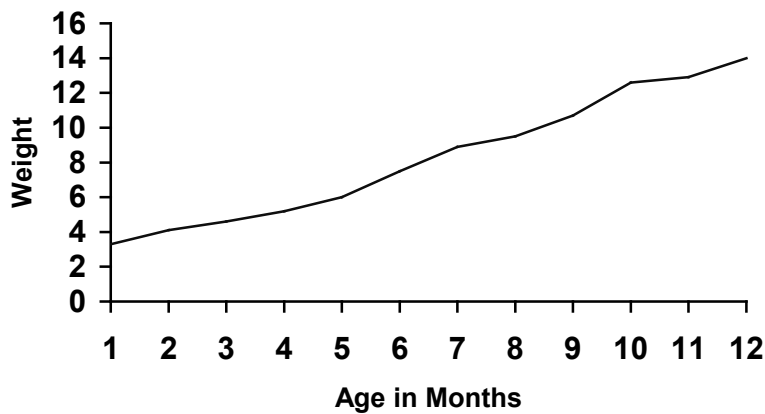
3. Draw a scatter graph on this grid to illustrate the data in the table about the shoe size and height of a group of pupils.

Shoe size	Height	Shoe size	Height
2	124	5	138
3	132	4	130
6	148	5	132
3	124	6	144
4	126	7	148



4. This line graph shows how the weight of a baby increases from birth until she is a year old.

**Weight of Baby**



Answer these questions from the graph:

- What weight was the baby when she was born?
- What weight was she at 3 months?
- A baby is supposed to double her weight in 6 months, did this baby do this?


A3 Unit 3 - Homework 18  
Formulae

Name:

Class:

Mark:

1. Paula works as a waitress in the local hotel. The manager tells her that she will be paid £5.50 for every hour that she works.

Calculate how much Paula will be paid when she works for:

(a) 4 hours

(b) 12 hours

(c) 7 hours

2. Paula's friend, Kirsty, works in another hotel and she gets paid £6.25 per hour plus £5 in tips each night.

Calculate how much Kirsty earns for working:

(a) 6 hours on Thursday night.



(b) from 5pm 'til 9pm on Friday night.

(c) 8 hours on Saturday night and  
6 hours on Sunday night.

3. Mrs. Parton needs to have her washing machine fixed. The engineer calculates the charge using this formula:

$$\text{Cost} = \text{Call out charge} + (\text{Hours} \times \text{£15})$$



How much would it cost Mrs. Parton to get her washing machine fixed if the engineer charges £20 call out charge and takes:

(a) 2 hours

(b) 4 hours

(c) 2.5 hours

4. Sign posts in the UK are in MILES but in other parts of Europe they are in KILOMETRES.

To change from Miles to Kilometres: **Multiply by 8 and divide by 5**

To change from Kilometres to Miles: **Multiply by 5 and divide by 8**

Change these to Km:

(a) 45 miles

(b) 100 miles

(c) 20 miles

Change to Miles:

(a) 64 km

(b) 100 km

(c) 120 km

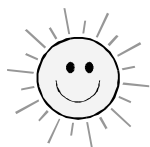
5. The Cook family are going on holiday and calculate the cost of the holiday using this formula:

$$\text{Cost} = \text{Adult price} \times \text{Number of Adults} + \text{£20 for each child}$$

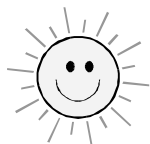
Work out how much it would cost for:

**ADULT PRICE: £230**

(a) 3 adults and 4 children



(b) 2 adults and 3 children



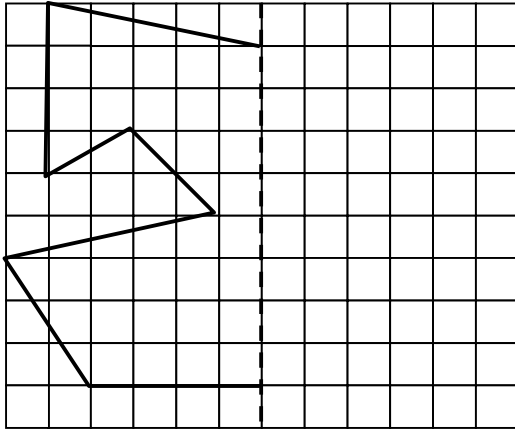
A3 Unit 3 - Homework 19  
Shape

Name:

Class:

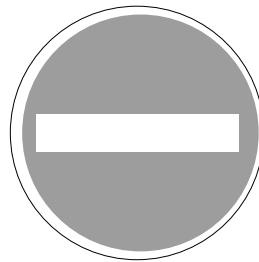
Mark:

1.

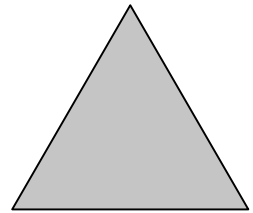


Complete this diagram so that the broken line is a line of symmetry

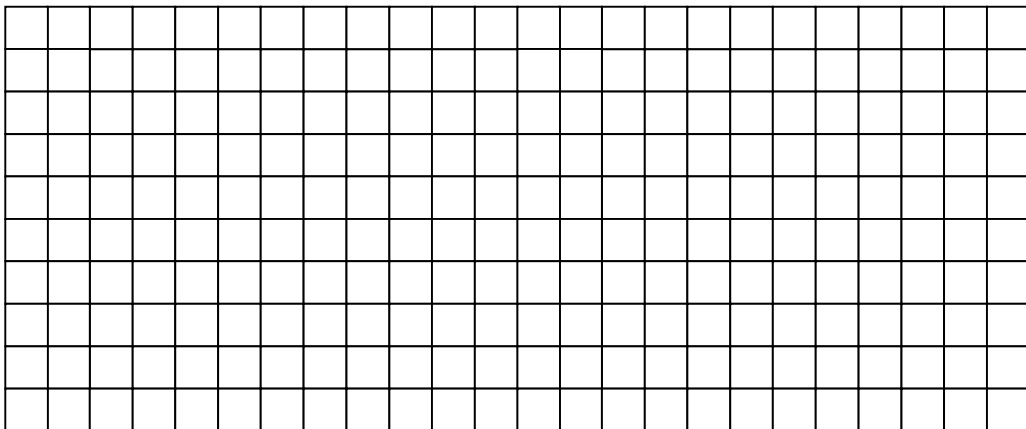
2. Draw all the lines of symmetry on these shapes:



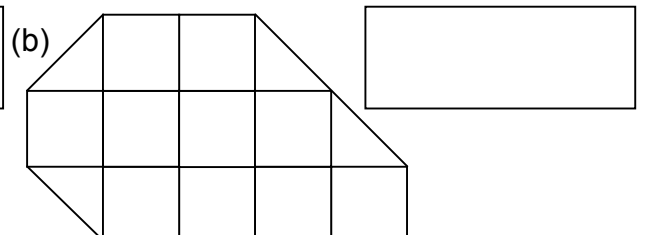
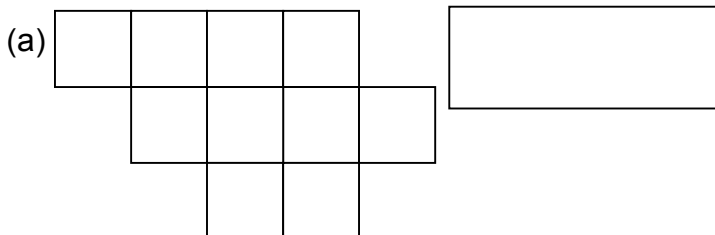
(b)



3. Make a tiling of 16 rectangles on this grid. Make them any size you wish.

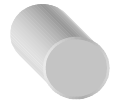


4. Write down the area of these shapes. Each square covers an area of  $1 \text{ cm}^2$ .

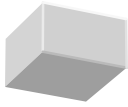


5. Write down the name of an everyday object that is shaped like a:

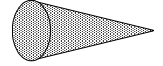
(a) Cylinder:



(b) Cuboid:

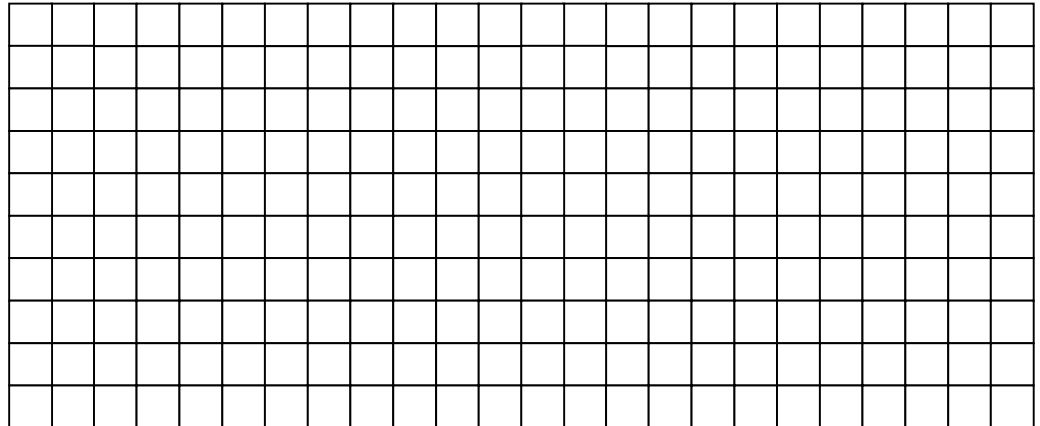


(c) Cone:



6. Draw the net of a cube on this grid.

Make each face 3 boxes by 3 boxes.



7. Calculate the area of these rectangles:

(a)

2 cm

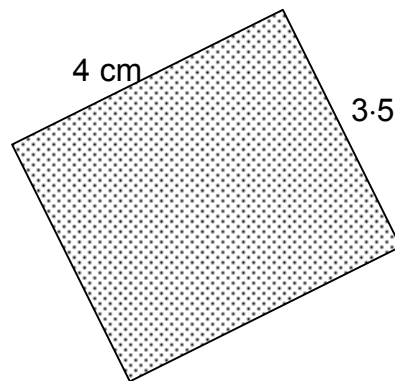


5 cm

(b)

4 cm

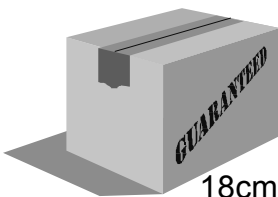
3.5 cm




8. Calculate the volume of these objects:

(a)

10cm



10cm

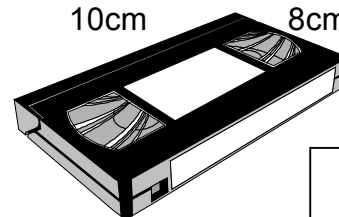
18cm

(b)

10cm

8cm

2cm



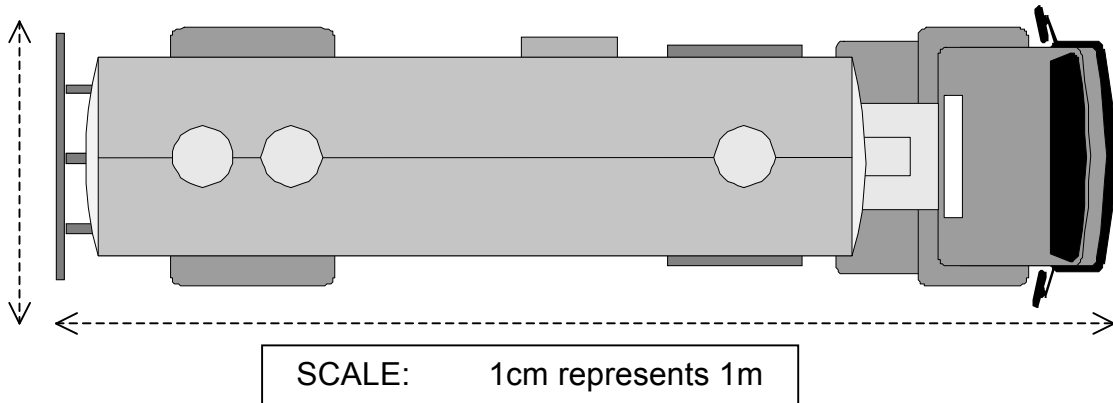
A3 Unit 3 - Homework 20  
Scales

Name:

Class:

Mark:

1.



- (a) This is a scale drawing of an articulated lorry. Measure the length and breadth of the drawing.

LENGTH:

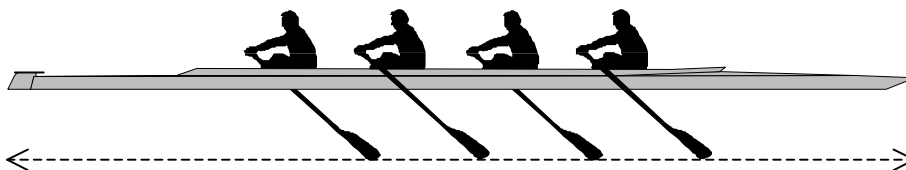
BREADTH:

- (b) Use the scale given to write down the actual length and breadth of the lorry.

LENGTH:

BREADTH:

2. (a) What is the actual length of this boat?



SCALE: 1cm represents 2m

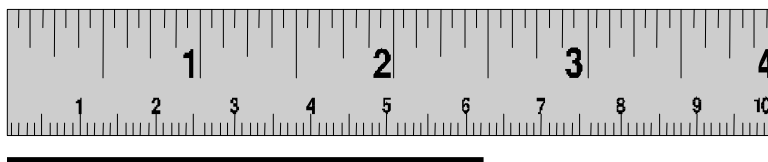
- (b)



SCALE: 1cm represents 4m

What is the actual height of the house including the chimney?

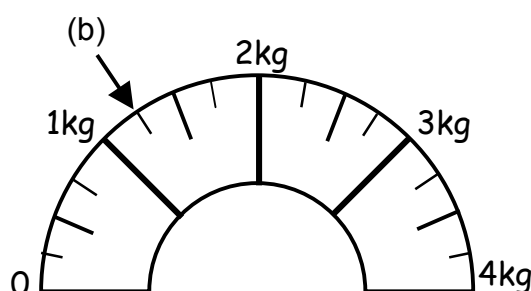
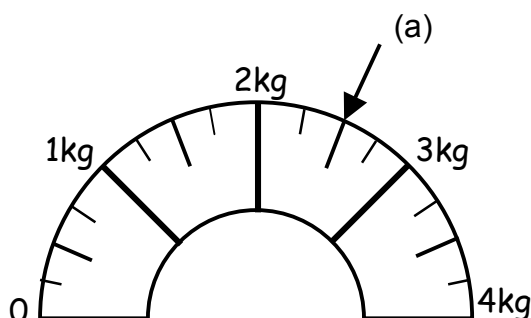
3. (a) Write down the length of this line:



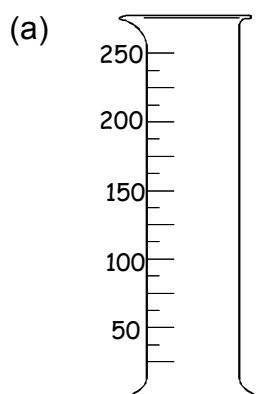
(b) Extend the line so that it measures 9.5 cm.

(c) What length of line have you added?

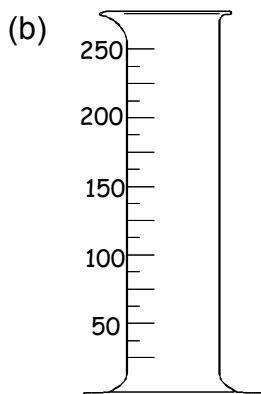
4. Write down the weight indicated on each of these scales?



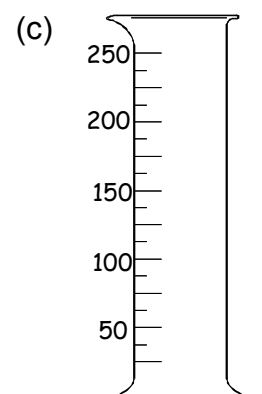
5. Shade these measuring jugs to show the amounts stated:



225 mls



175 mls



90 mls

6. Use a protractor to measure these angles:

