

Mathematics
Using Mathematics in
Everyday Situations 1
Access 2

9042

Autumn 2001

HIGHER STILL

Mathematics

Using Mathematics
in Everyday Situations 1
Access 2

Support Materials



Mathematics – Using Mathematics in Everyday Situations 1, 2 and 3

These support materials have been prepared on behalf of the Higher Still Development Programme by teachers from North Lanarkshire Council.
The Higher Still Development Programme gratefully acknowledges their contribution.

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First published 2001

Learning + Teaching Scotland
Gardyne Road
Broughty Ferry
Dundee
DD5 1NY






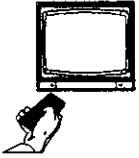

Tel. 01382 443 600

Outcome 1

Student worksheet 1

Daily events





Daily events are things that happen every day.
Here is a table showing some parts of Nadia's Day.

						
Get up	Breakfast	Shopping	Lunch	Swimming	Watch TV	Bedtime
9am	9.30am	10.15am	12 noon	1.55pm	8.05pm	10.30pm

1.

- A. What time does Nadia get up?
- B. When does she go shopping.
- C. What is Nadia doing at 12 noon?
- D. When does she go swimming?
- E. It is 10 pm, how long before Nadia goes to bed?

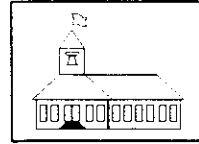
2. Now it's your turn. Choose a day and complete the table below. Some of the table has been filled in for you.

						
Get up	Breakfast		Lunch			Bedtime

Student worksheet 2

Daily events

Here is a timetable for a class of primary 7 pupils on a day visit to high school:



9.00 am	Assemble in Hall
9.10 am	Science
10.35 am	PE
10.55 am	Interval
11.05 am	Assemble in hall to meet Head Teacher
11.35 am	Spanish
12.30 pm	Lunch
1.30 pm	Assemble in hall to meet year head
1.45 pm	Technical
2.45 pm	Assemble and return to primary school

1. What time does the first lesson start?
2. How long does the morning interval last?
3. When does the PE lesson start?
4. When do the pupils meet the Head Teacher?
5. How long do the pupils have for lunch?
6. What time do the pupils assemble to return to their primary school?



John's timetable

Here is a copy of John's weekly timetable. Some of his subjects are written in a short way:

Bus St	Business Studies	Mod St
Geo	Geography	PSE
Home E	Home Economics	Reg
ITC	Information Technology and Computing	Tech
		Modern Studies
		Personal and Social Education
		Registration
		Technical

Day	Session 1 9.00 – 9.55	Session 2 9.55 – 10.45	Session 3 11.00 – 11.50	Session 4 11.50 – 12.45	Reg 1.45 – 1.55	Session 5 1.55 – 2.50	Session 6 2.50 – 3.45
Monday	Music	History	Science	Spanish		Maths	Bus St
Tuesday	PE	Maths	Tech	English		Spanish	Science
Wednesday	Art	RE	Maths	Geog		English	Spanish
Thursday	Science	Maths	Mod St	Home E		RE	English
Friday	PSE	English	PE	ITC		Science	Spanish

Student worksheet 3
Weekly events 1

Weekly events and things that happen every week.

Some examples of things people might do every week are:

go to church

go to a football match

go for dancing lessons

While you are at school you have a weekly timetable: you get the same subjects on the same day at the same time each week.

Look at John's timetable and answer these questions:

1. What time does his first lesson start each day?
2. What time does school finish each day.
3. It is 9.55am and John is in English. What day of the week is it?
4. John is in Science, it is nearly home time. What day of the week is it?
5. Where is John on a Wednesday at 11am?
6. What day does John not have Maths?
7. John has ITC on one day only, which day is it?
8. How long does registration last ?
9. Where is John after registration on a Thursday?
10. On which two days does John bring PE kit?

Student worksheet 4
Weekly events

Use your own timetable to answer these questions:

1. What time does your first class start?
2. When does school finish?
3. How long do you have for lunch?
4. What time does morning interval start?
5. How long does it last?
6. What is your favourite subject?
7. What day(s) do you have this subject?
8. What lesson are you having before home time on Wednesday?
9. What time did this maths lesson start?
10. When does it finish?
11. What time do afternoon classes start?
12. What lesson do you have before lunch time on a Friday?

Student worksheet 5
Annual events

Annual events take place every year.

One example of this is your birthday. It is the same date and the same month each year.

When is your birthday?

See if you can match these annual events with their correct date and month.

- | | |
|---------------------|---------------------------------|
| 1. Christmas Day | a. 5 th of November |
| 2. Valentine's Day | b. 1 st of January |
| 3. April Fools' Day | c. 31 st of October |
| 4. Boxing Day | d. 14 th of February |
| 5. Hogmanay | e. 25 th of December |
| 6. Guy Fawkes' Day | f. 1 st of April |
| 7. Halloween | g. 26 th of December |
| 8. New Year's Day | h. 31 st of December |



Information sheet
Days of the week



What day were you born?

Monday's child is fair of face

Tuesday's child is full of grace

Wednesday's child is full of woe

Thursday's child has far to go

Friday's child is loving and giving

Saturday's child works hard for a living

and a child that is born on a Sunday is bonny and lively and likes to play.

There are seven days in a week:

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Student worksheet 6
Days of the week

Use your information sheet to help you answer these questions:

1. What day comes after:

- a. Tuesday
- b. Saturday
- c. Friday
- d. Sunday
- e. Wednesday

2. What day comes before:

- a. Sunday
- b. Thursday
- c. Saturday
- d. Monday
- e. Wednesday

3. What day comes between:

- a. Friday and Sunday
- b. Wednesday and Friday
- c. Monday and Wednesday
- d. Thursday and Saturday
- e. Saturday and Monday

Student worksheet 7
Days of the week

4.

Put these days in their correct order:

- a. Monday, Friday, Wednesday, Tuesday.
- b. Saturday, Tuesday, Monday, Wednesday.
- c. Wednesday, Friday, Saturday, Monday.
- d. Friday, Monday, Wednesday, Saturday.
- e. Thursday, Monday, Friday, Wednesday.

5.

What days are missing from these lists?
Remember: there should be 7 days in
each list

- a. Thursday, Friday, Sunday, Monday, Tuesday
- b. Monday, Wednesday, Thursday, Friday,
Saturday.
- c. Sunday, Tuesday, Wednesday, Friday.
- d. Wednesday, Thursday, Friday, Sunday,
Monday.
- e. Saturday, Monday, Tuesday, Wednesday.

Student worksheet 8
Days of the week

See if you can answer these without looking at the fact sheet.

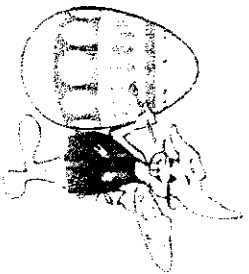
1. Today is Friday. What day will it be tomorrow?
2. Yesterday was Tuesday
 - a) What day is it today?
 - b) What day will it be tomorrow?
3. Tomorrow is Saturday
 - a) What day will it be the day after tomorrow?
 - b) What day was it the day before yesterday?
4. Weekdays are the days we go to school.
Write down their names.
5. Which two days do we not go to school?
6. What is the name we give to this part of the week?
7. Write down all the days of the week in their correct order.

Did you manage without looking at the fact sheet? Well done!



April

Monday		3	10	17	24
Tuesday		4	11	18	25
Wednesday		5	12	19	26
Thursday		6	13	20	27
Friday		7	14	21	28
Saturday	1	8	15	22	29
Sunday	2	9	16	23	30



Student worksheet 9
Monthly calendar - April

Use the calendar for the month of April to help you answer these questions:

1. How many days are there in April?
2. What day is the 1st of this month?
3. What is the last day of the month?
4. How many Sundays are there in April?
5. How many Tuesdays are there in April?
6. Nadia's birthday is on the 13th, what day is this?
7. The Walkers are going on holiday for one week, on the 15th of April.
 - a) What day do they leave?
 - b) What date do they return?
 - c) What day is this?
8. Mr. Walker returns to work two days after they come home.
 - a) What date will this be?
 - b) What day will it be?
9. Do you know any special dates in this month?
Somebody's birthday? Annual event?



Information sheet

Mrs. Smart's Monthly Planner

DECEMBER					
Monday		6	13	20	27
			Start of schedules	Schedules finish	
Tuesday		7	14	21 S1 party	28
Wednesday	1	8	15 Christmas concert	22 S2 party	29
Thursday	2 House assemblies	9	16	23 School closes	30
Friday	3	10	17	24	31
Saturday	4	11	18	25	
Sunday	5	12	19	26	

Student worksheet 10
Monthly planner

Use Mrs. Smart's monthly planner to answer these questions.

1. How many days in December?
2. What day is the 1st of this month?
3. What day is the last day of the month?
4. What day do the House Assemblies start?
5. Schedules start on the 13th of this month?
 - a) What day is this?
 - b) How many days do they last? (Remember to count the school days only).
6. What event takes place two days after the schedules start?
7. What is the day and date of the S1 party?
8. What event takes place the day after this?
9. The school closes for the holidays on the 23rd of December.
 - a) How many school days in this month are the pupils on holiday?
 - b) What annual event takes place two days after school closes?
10. Are there any other special dates in this month?

Information sheet

'Adam Up' is a famous pop star. Follow his diary for the month of

FEBRUARY

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4 Opening a shop in Coatbridge	5 Concert in SECC	6
7	8	9	10	11	12	13
14 Valentine's Day disco in Cumbernauld	15	16	17 Visit to HMV to sign autographs	18	19	20
21	22	23	24	25	26	27
28 Start of a tour of America	29					

Student worksheet 11
Monthly calendar – February

Use 'Adam Up's' diary for the month of February to help you answer these questions:

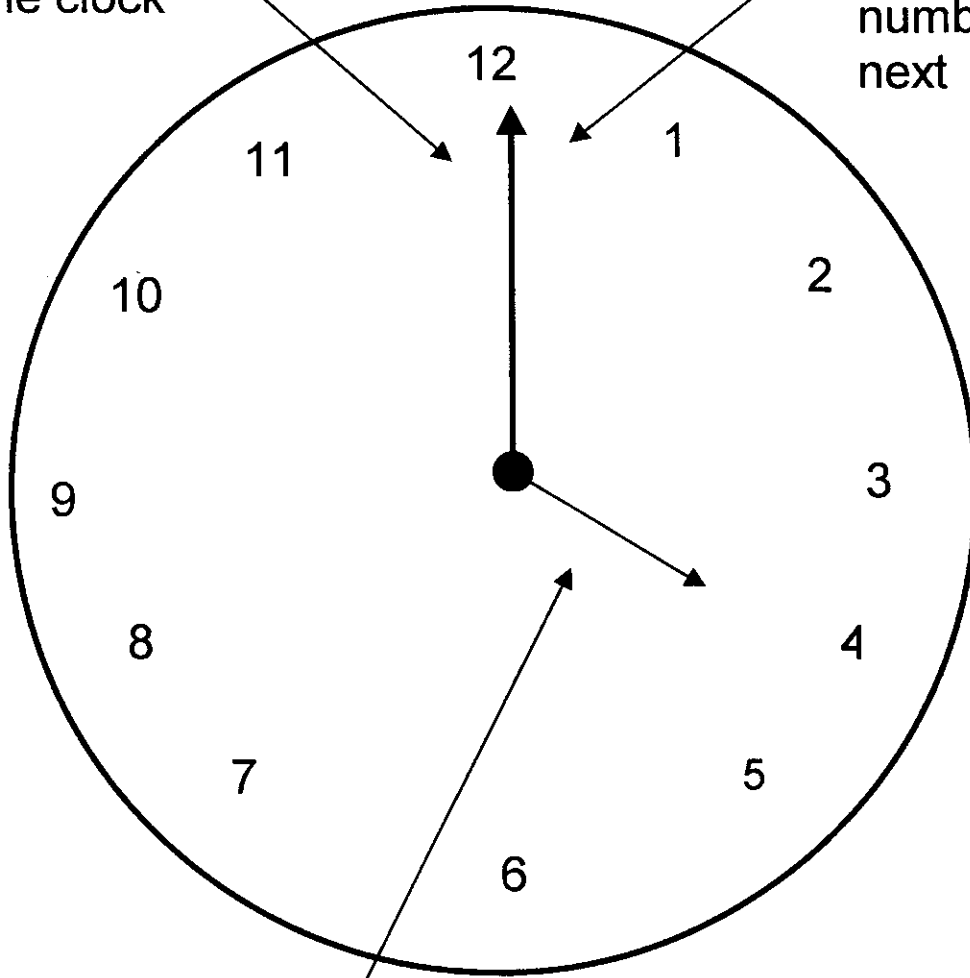
1. When is 'Adam Up' opening the shop in Coatbridge?
2. What is he doing the next day?
3. He has no engagements after the 5th until the 14th, how many days is he off work?
4. Where is he on the 14th of the month?
5. How many days between that and his visit to HMV to sign autographs?
6. What day does he leave for his tour of America? What date is this?
7. How many full weeks does 'Adam Up' have when he is not working?
8. Are there any special dates in this month - birthdays? annual events?
9. How many Mondays are there in February?
10. Today is Wednesday the 9th of February,
 - A What date will it be two weeks from today?
 - B What day will that be?



Information sheet
Time 1

This long hand is the minute hand. It takes 60 minutes or 1 hour to go all the way round the clock

It takes 5 minutes for this hand to move from one number to the next



This short hand is the hour hand. It takes 1 hour or 60 minutes for this hand to move from one number to the next

So there are 60 minutes in 1 hour

Information sheet

Time 2

O'clock

55 minutes past

5 minutes past

50 minutes past

10 minutes past

Quarter to 45

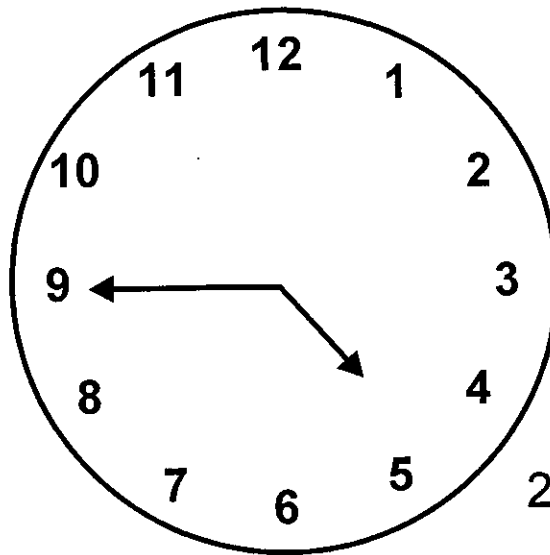
15 Quarter past

40 minutes past

20 minutes past

35 minutes past

25 minutes past



30

Half past

There are two ways of telling the time on this clock:

- 1 four forty – five and
- 2 quarter to five

This number tell us the hour

We write this time as:

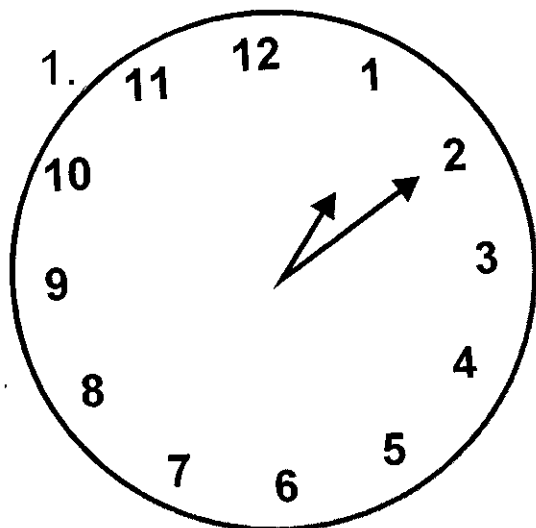
← 4:45 →

These numbers tell us how many minutes after the hour

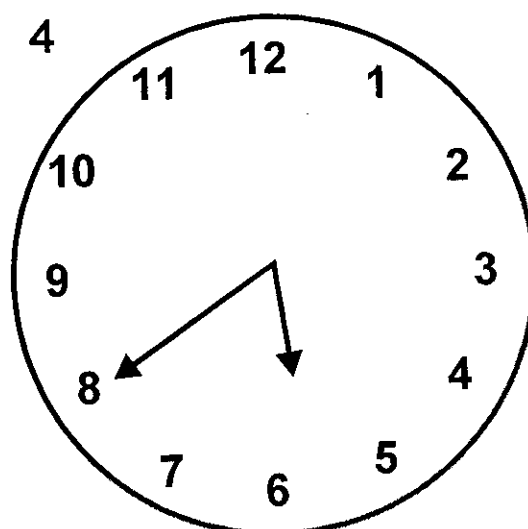
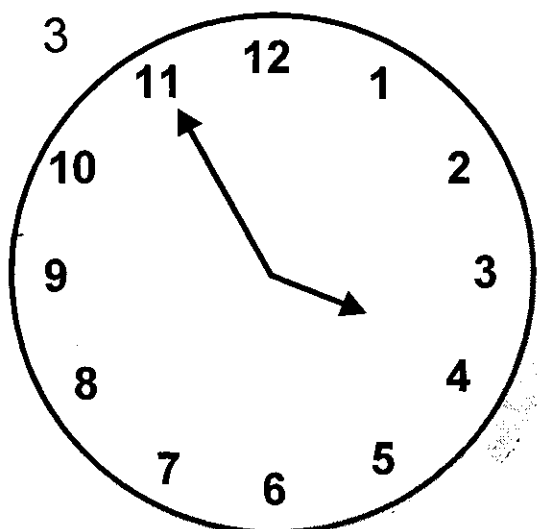
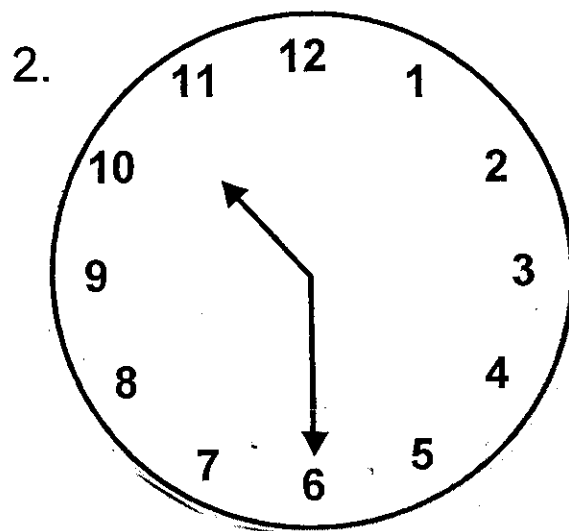
Student worksheet 12

Time

Write two different ways of **telling the time** on each of these clocks. The first one has been done for your. Use **Information sheet – Time 2** to help you.

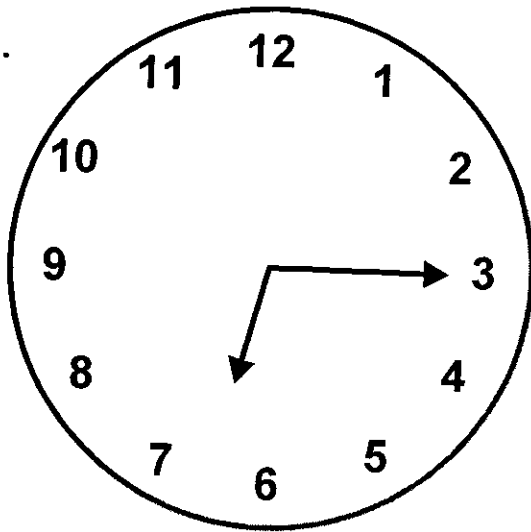


Ten past one
One ten

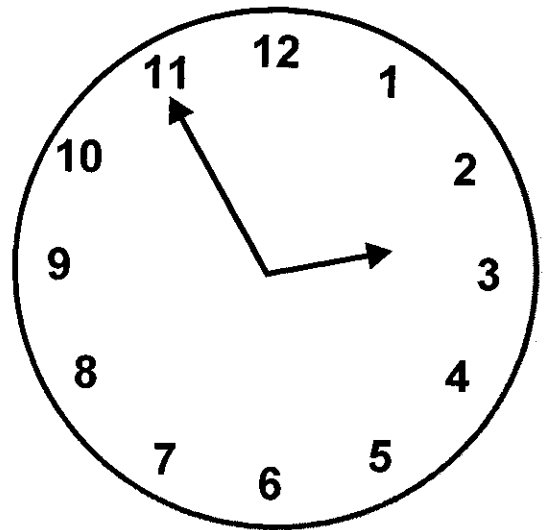


Student worksheet 13
Time

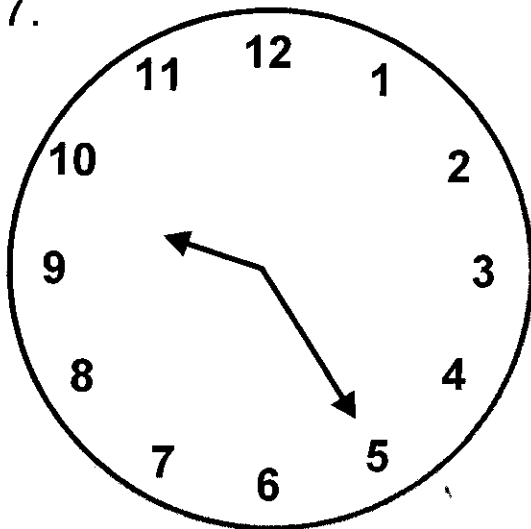
5.



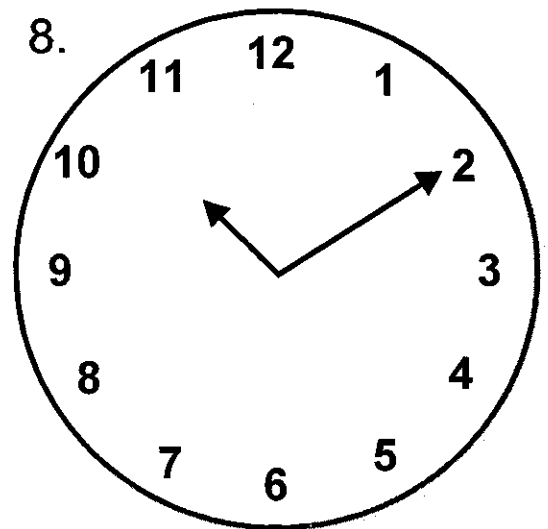
6.



7.

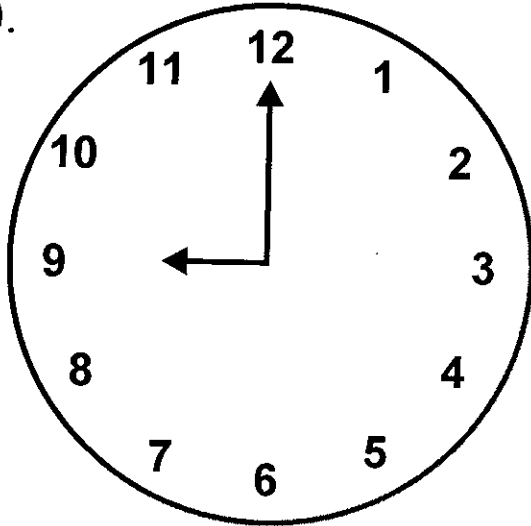


8.

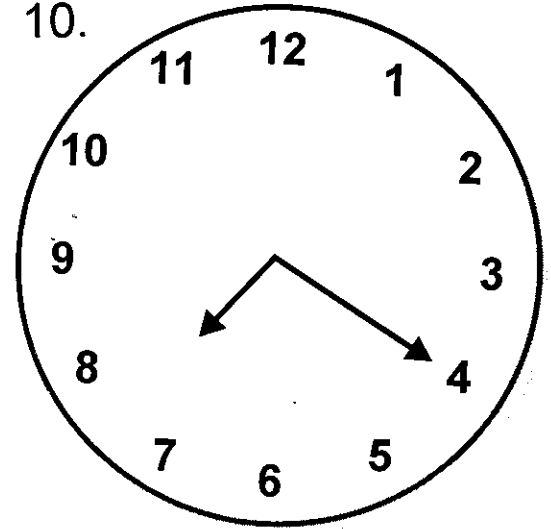


Student worksheet 14
Time

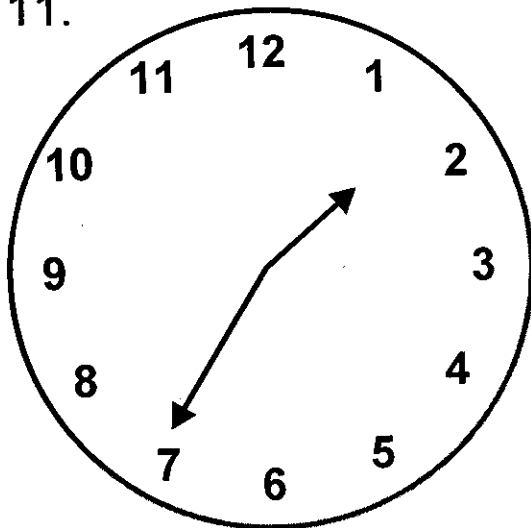
9.



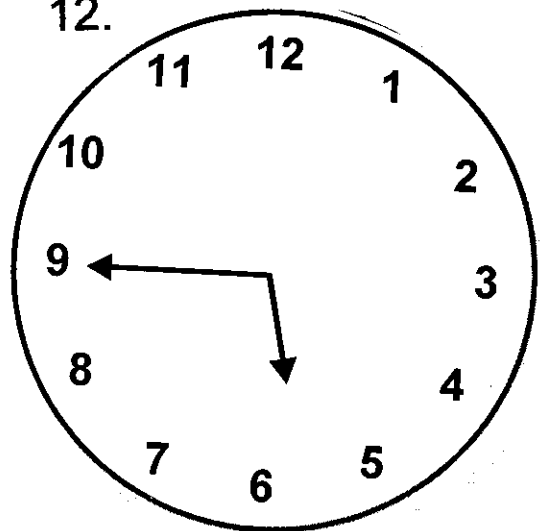
10.



11.



12.

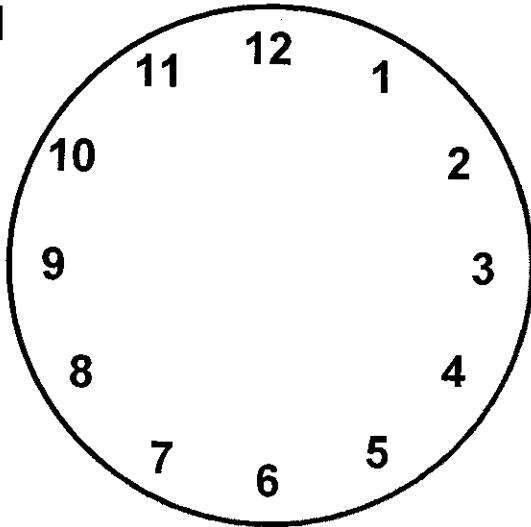


Student worksheet 15

Time

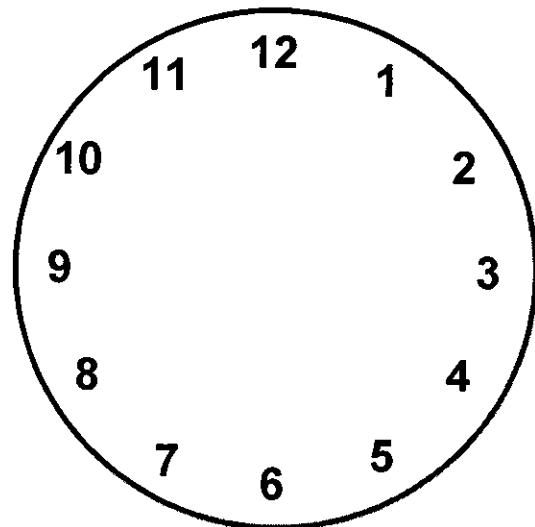
Draw the hands on these clocks to show the times given

1.



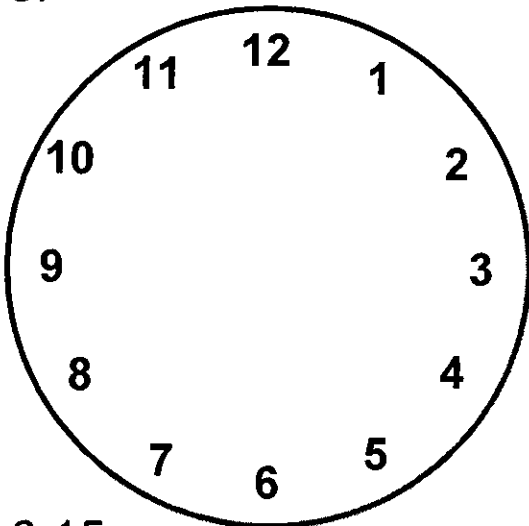
three twenty

2.



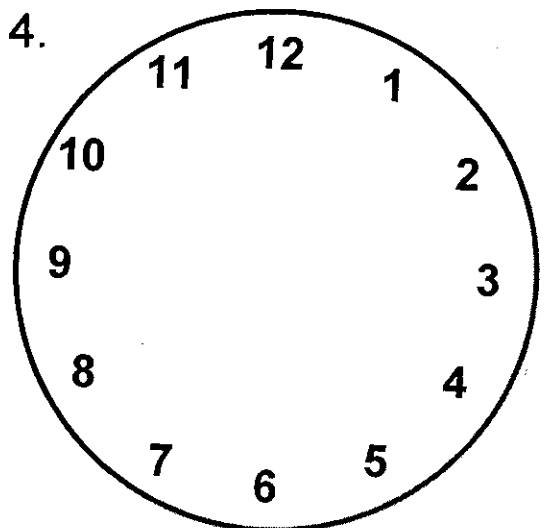
five past one

3.



8.15

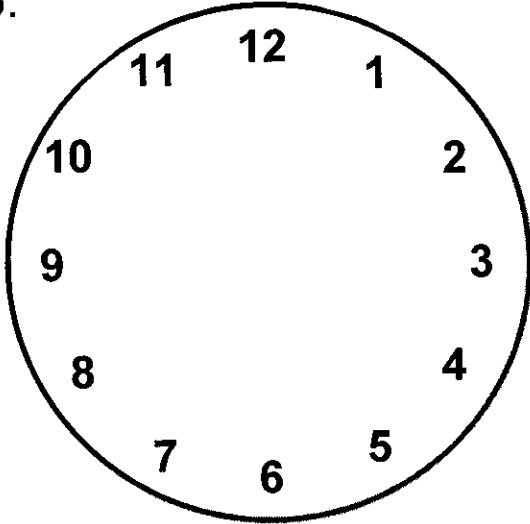
4.



seven o'clock

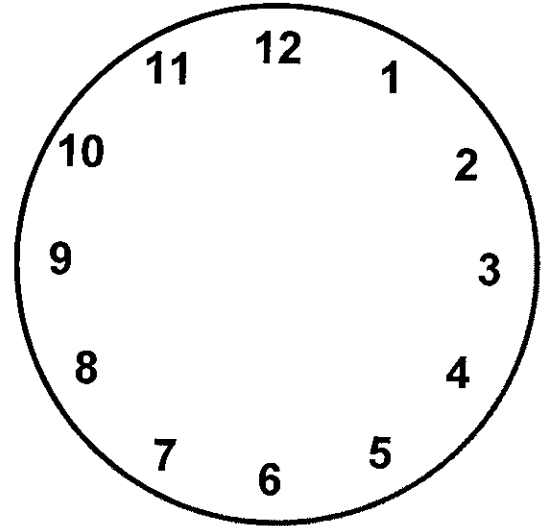
Student worksheet 16
Time

5.



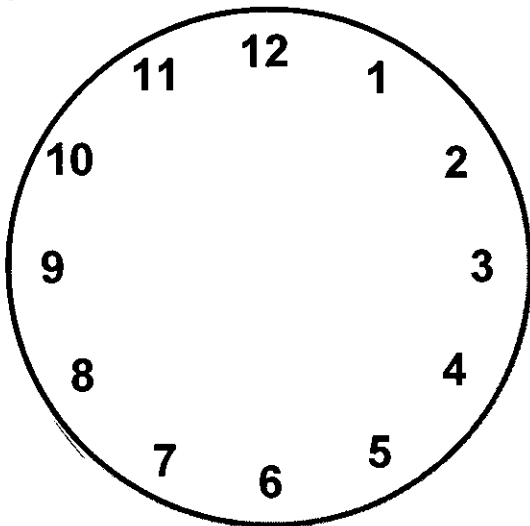
five to nine

6.



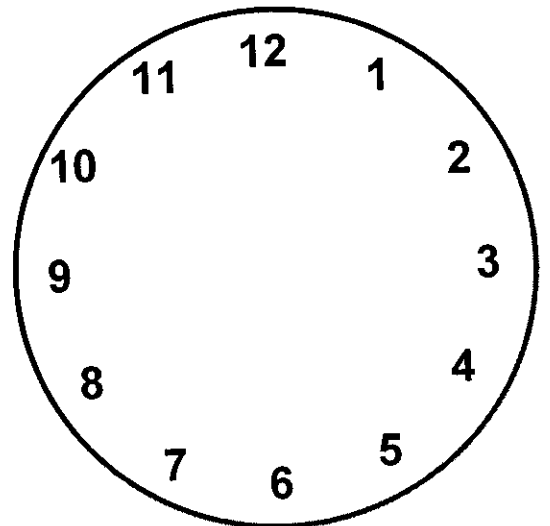
half past twelve

7.



4.35

8.

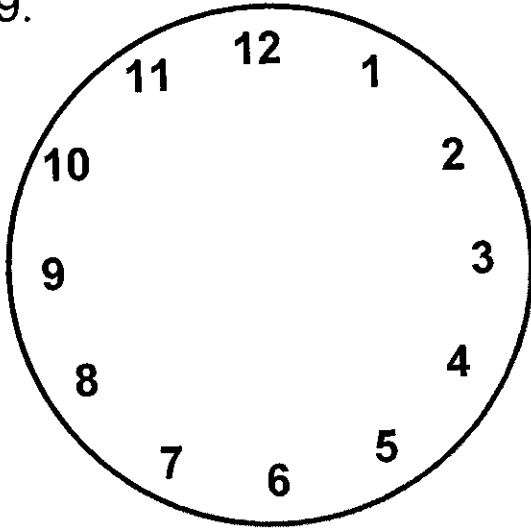


ten to two

Student worksheet 17

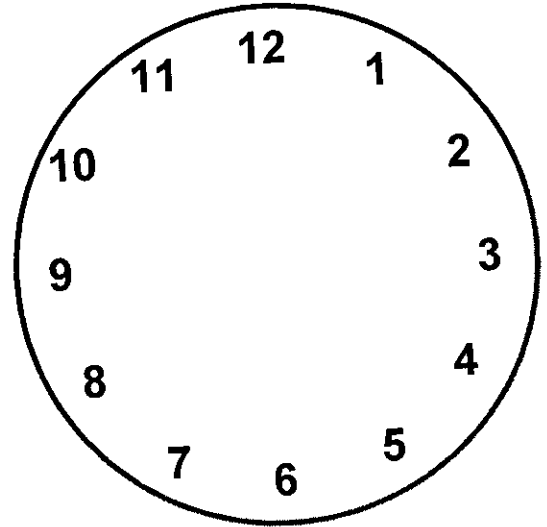
Time

9.



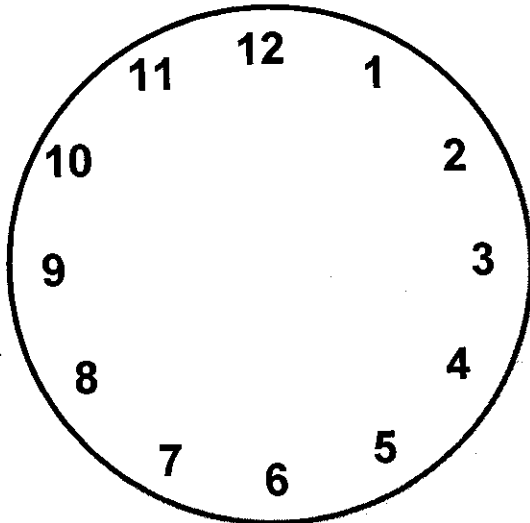
twenty to four

10.



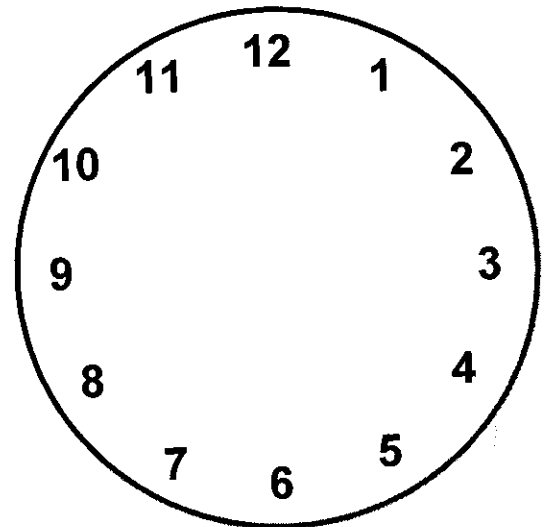
quarter past nine

11



10.10

12



12.05

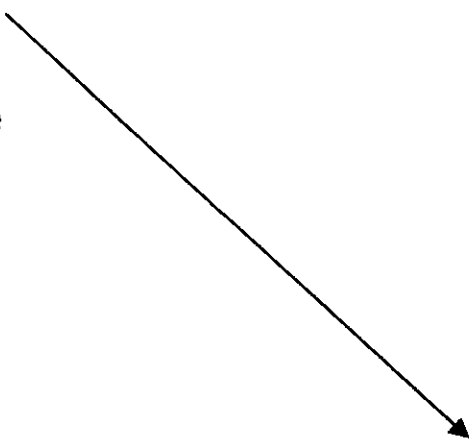
Student worksheet 18

Time

Match the times. The first one has been done for you.

You can use your **information sheets** to help you

Three twenty five	1:12
Quarter past nine	8:45
Five past five	6:00
Half past ten	4:45
Seven fifty	3:25
Eleven twenty	7:55
Twelve minutes past one	9:15
Six o'clock	7:50
Four forty five	5:05
Five to eight	10:30
Quarter to nine	11:20



Information sheet
Time 3

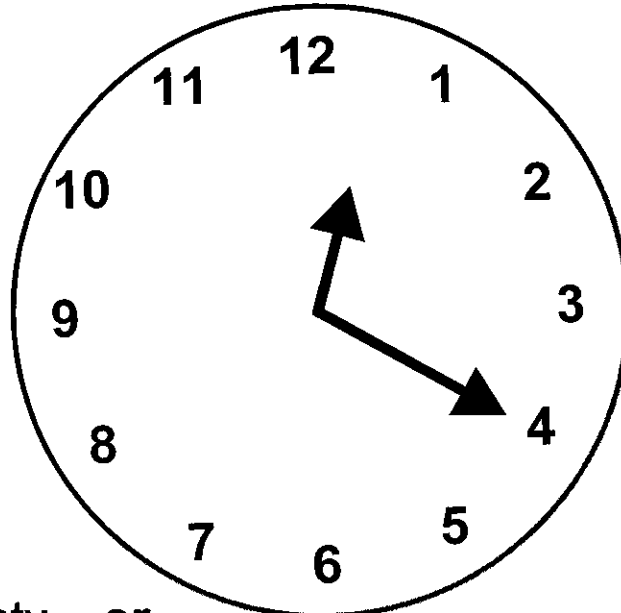
Sometimes the time is shown on a **digital clock** like this:



These two numbers show the hours

These two numbers show the minutes

This clock also shows the same time:



twelve twenty or
twenty past twelve

Student worksheet 19
Time

Write the time shown on each of these digital clocks
in two ways:

1.



2.



3.



4.



5.



6.



7.



8.



Student worksheet 20
Time

9.



10.



11.



12.



13.



14.



15.



16

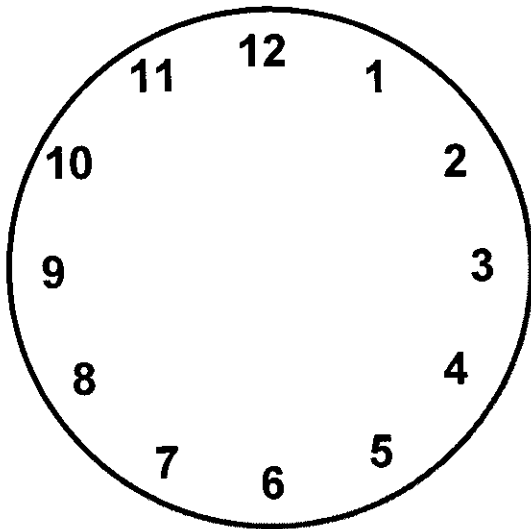


Student worksheet 21

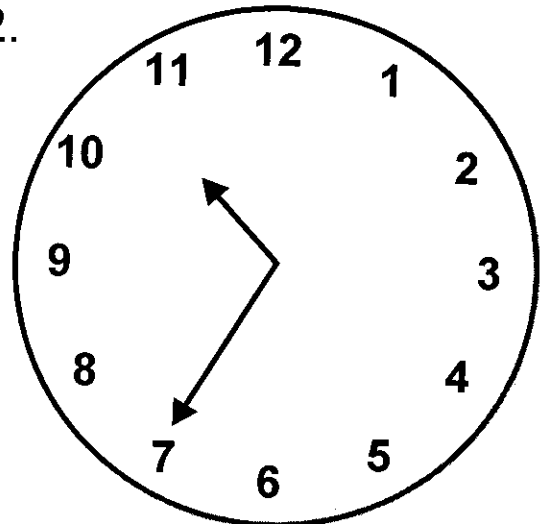
Time

Both these clocks should be showing the same time.
Fill in the missing hands on the clock face or the
missing numbers on the digital clock:

1.

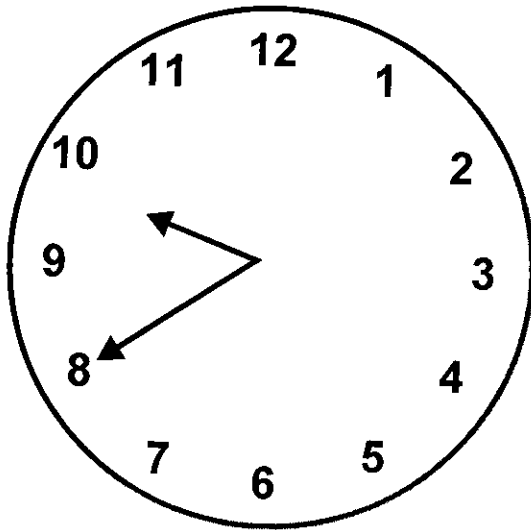


2.

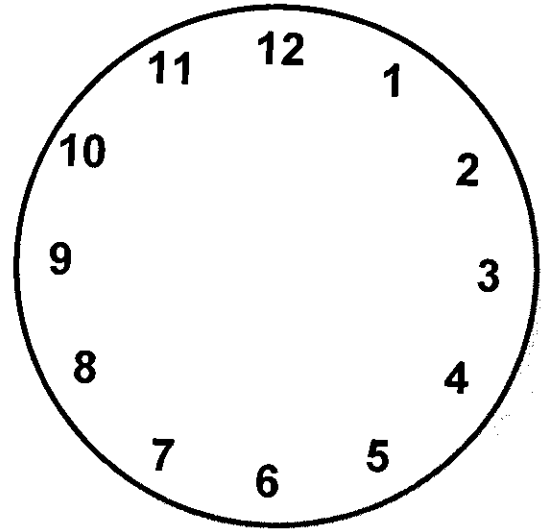


Student worksheet 22
Time

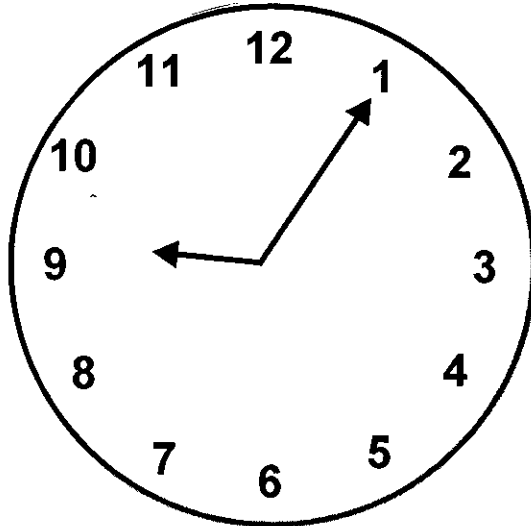
3.



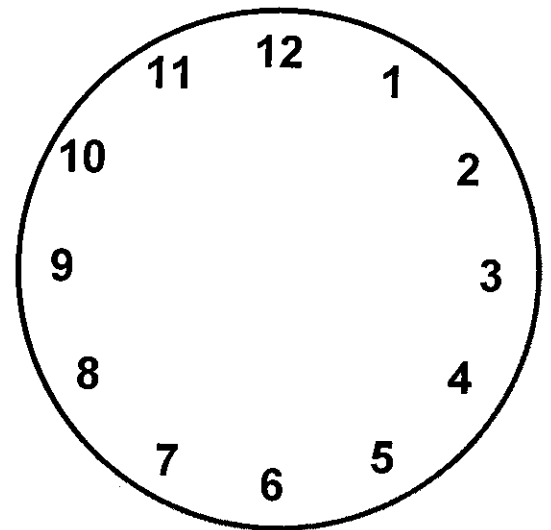
4.



5.

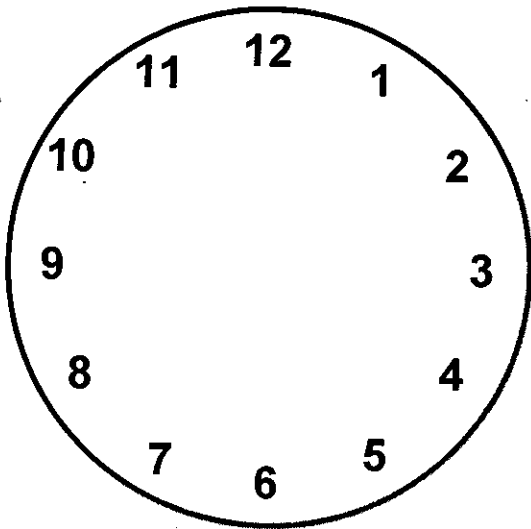


6.

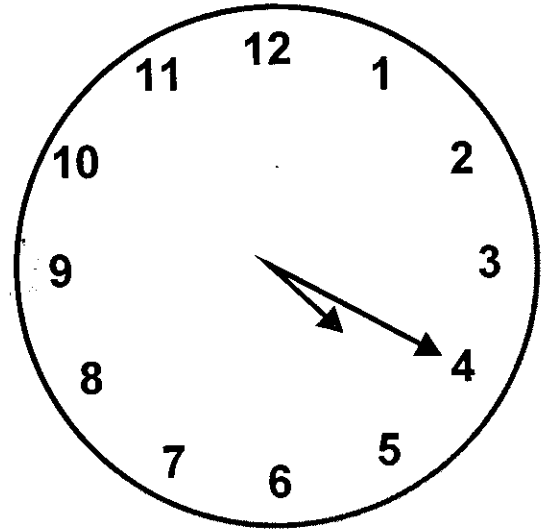


Student worksheet 23
Time

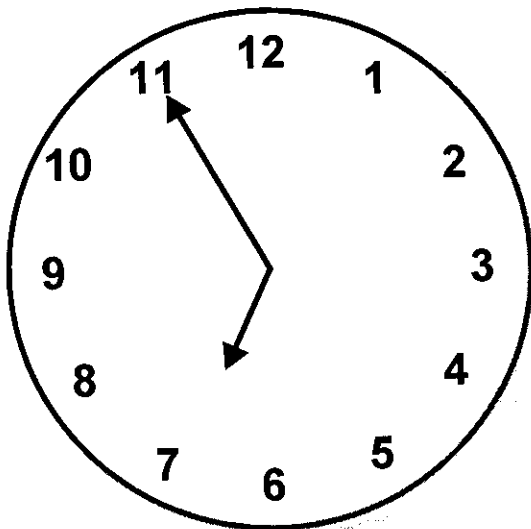
7.



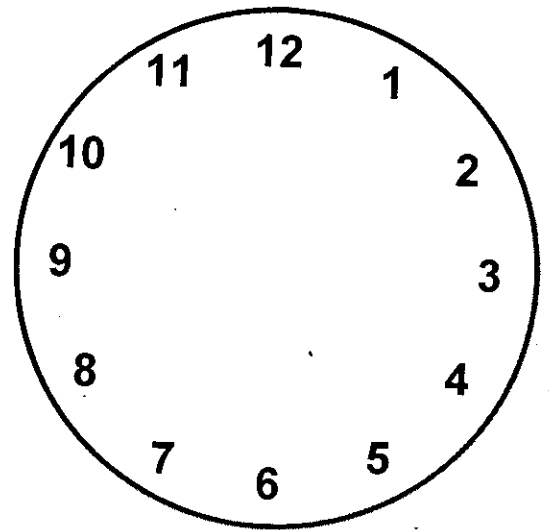
8.



9.



10.



Student worksheet 24
Reading a timetable

A third year class from a school in Glasgow is going for a day visit to the Time Capsule in Coatbridge.

They are travelling by train. Here is their timetable for the day:



09:30	Leave by train from Queen Street Station
10:20	Arrive at Time Capsule
12.15	Lunch in cafeteria
12:45	Ice skating
03:00	Leave Coatbridge by train
03.25	Arrive back in Glasgow

1. What time do the pupils leave Queen Street Station?
2. How long does it take them to get to the Time Capsule?
3. What time do they have lunch?
4. How long does lunch last?
5. How long do they have in the ice skating?
6. When do they leave Coatbridge?
7. What time do they arrive back in Glasgow?

Student worksheet 25
Reading a timetable

Here is the bus timetable from Buchanan Street to Cumbernauld:

Buchanan Street	09:00	09:30	10:00
Riddrie	09:18	09:48	10:18
Stepps	09:35	10:05	10:35
Cumbernauld	10:30	11:00	11:30

1. A bus leaves Buchanan Street at 09:00, when does it arrive in Cumbernauld?
2. How long has the journey taken?
3. The bus arrives in Cumbernauld at 11.30, when did it leave Buchanan Street?
4. A bus leaves Buchanan Street at 10.00 and arrived in Riddrie at 10:18. How long has this journey taken?
5. It is 10:05, the bus is in Stepps.
 - a) When did it leave Buchanan Street?
 - b) When will it arrive in Cumbernauld?
6. How long is the journey from Riddrie to Stepps?



Outcome 2

Student worksheet 26
Identification of coins and banknotes

Place the correct coin or banknote beside the amount shown in each box.

When you have finished, get your teacher to check it.

a)

1p

g)

£2 coin

b)

5p

h)

20p

c)

£5 note

i)

£20 note

d)

10p

j)

2p

e)

£10 note

k)

50p

f)

£1 coin

l)

£1 note

Student worksheet 27

Look at the table below. Fill in the spaces below with the correct amount of each coin or banknote. You can use the pretend money to help you. The first one has been done for you.



1.

Amounts to 10p

Amount of Money	5p	2p	1p
9p	1	2	
7p			
5p			
2p			
8p			
6p			
3p			

Student worksheet 28

2.

Amounts to 20p



Amount of Money	10p	5p	2p	1p
13P	1		1	1
19P				
14P				
15P				
12P				
11P				
16P				
17P				

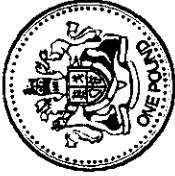
Student worksheet 29



3. Amounts to 50p

Amount of Money	20p	10p	5p	2p	1p
36p	1	1	1		1
48p					
22p					
39p					
28p					
43p					
18p					
31p					
45p					
19p					

Student worksheet 30



4.

Amounts to £1.00

Amount of Money	50p	20p	10p	5p	2p	1p
97p	1	2		1	1	
62p						
86p						
73p						
58p						
84p						
91p						
70p						
65p						
49p						

Student worksheet 31

5.

Amounts to £2.00

Amount of Money	£1.00	50p	20p	10p	5p	2p	1p
£1.63	1	1		1		1	1
£1.95							
£1.57							
£1.88							
£1.72							
£1.90							
£1.55							
£1.69							
£1.81							

Student worksheet 32

6.

Amounts to £3.00

Amount of Money	£2.00	£1.00	50p	20p	10p	5p	2p	1p
£2.96	1		1	2		1		1
£2.68								
£2.23								
£1.75								
£2.59								
£2.81								
£2.94								
£2.82								
£2.70								

Student worksheet 33

7.

Amounts to £4.00

Amount of Money	£2.00	£1.00	50p	20p	10p	5p	2p	1p
£3.58	1	1	1			1	1	1
£3.90								
£3.09								
£3.26								
£3.82								
£3.65								
£3.41								
£3.74								
£3.37								

Student worksheet 34

8.

Amounts to £5.00

Amount of Money	£2.00	£1.00	50p	20p	10p	5p	2p	1p
£4.88	2		1	1	1	1	1	1
£4.43								
£4.99								
£4.10								
£4.64								
£4.37								
£4.75								
£4.56								
£4.22								

Student worksheet 35

Put the coins and banknotes in the boxes to make up the money shown.
Get your teacher to check it.

	£2.99
--	-------

	£4.76
--	-------

Student worksheet 37

Put the coins and banknotes in the boxes to make up the money shown.
Get your teacher to check it.

	£0.94
--	-------

	£4.27
--	-------

Student worksheet 38

Put the coins and banknotes in the boxes to make up the money shown.
Get your teacher to check it.

	£3.33
--	-------

	£2.55
--	-------

Student worksheet 39

Using your coins to help you, count up how much there is in each box. Write your answer below:

1.

£1 coin	20p
50p	10p

2.

£1 coin	20p
20p	5p

2.

£2 coin	£2 coin
10p	1p
	1p

4.

20p	50p	10p	5p
2p	1p	2p	

5.

£2 coin	50p	10p
10p	1p	2p

6.

£1 coin	£1 coin
20p	10p
2p	1p

7.

50p	50p	20p	10p
5p	2p	2p	1p

8.

£2 coin	£1 coin
20p	20p
10p	2p
	1p

Student worksheet 40

Using pretend coins to help you, make up the amounts in 2 different ways. The first one has been done for you.

Making amounts up to 10p

9p	5p 2p 2p
9p	2p 2p 2p 2p 1p
5p	
5p	
7p	
7p	
4p	
4p	
6p	
6p	

Making amounts up to 20p

17p	
17p	
12p	
12p	
15p	
15p	
19p	
19p	
13p	
13p	

Student worksheet 41

Making amounts up to 50p

35p	
35p	
42p	
42p	
28p	
28p	
39p	
39p	
45p	
45p	

Making amounts up to £1

75p	
75p	
99p	
99p	
82p	
82p	
66p	
66p	
94p	
94p	

Student worksheet 42

Look at the shopping list below. In the box, place / write the **exact amount** of money you would use to pay for each item.

1. Daily Record 28p

2. A CD single £3.99

3. Bus fare to Glasgow £2.25

4. A ticket for swimming £1.25

Student worksheet 43

5. Return train fare to £3.10
Motherwell

6. A T-shirt £4.99

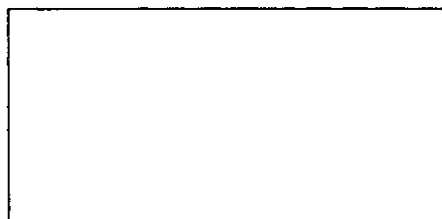
7. A can of deodorant £0.99

8. Shower gel £1.75

9. A haircut £3.50

Student worksheet 44


10. A can of Irn Bru £0.50
and a Mars Bar £0.35



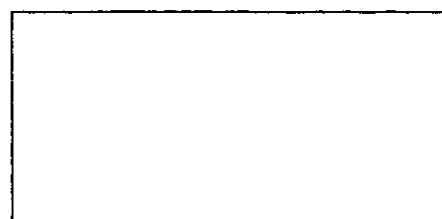
11. A bag of crisps £0.25
and a buttered £0.30
roll



12. A Big Mac £1.99
large can of Coke £1.25
and a large fries £1.25



13. Ticket for a £4.50
football match



14. A cup of tea £0.70
and a cake £0.65



Student worksheet 45

How much change would I get if I paid for the items on pages 42, 43 and 44 using the money shown? Again place / write the amounts in the box.

1. Daily Record 50p

2. A CD single £5.00

3. Bus fare to Glasgow £2.50

4. A ticket for swimming £2

Student worksheet 46

5. Return train fare to Motherwell £4.00

6. A T-shirt £5.00

7. A can of deodorant £2.00

8. Shower gel £2.00

9. A haircut £5.00

Student worksheet 47

10. A can of Irn Bru £1.00
and a Mars Bar

11. A bag of crisps £0.70
and a buttered
roll

12. A Big Mac £5.00
large can of Coke
and a large fries

13. Ticket for football £4.60
Match

14. A cup of tea and a £1.50
cake

Information sheet

95p is the same as £0.95

There are
no pounds

This is the
decimal
point

These are
the pence

250p is the same as £2.50

These are
the pounds

This is the
decimal
point

These are
the pence

Student worksheet 48

Using the fact sheet to help you, change these amounts into pounds and pence.

The first one has been done for you.

Remember to use the £ sign and the decimal point

- | | | |
|----------|-------|----------|
| 1. 175p | £1.75 | 11. 9p |
| 2. 360p | | 12. 202p |
| 3. 450p | | 13. 137p |
| 4. 225p | | 14. 296p |
| 5. 199p | | 15. 314p |
| 6. 15p | | 16. 50p |
| 7. 305p | | 17. 483p |
| 8. 80p | | 18. 6p |
| 9. 445p | | 19. 166p |
| 10. 288p | | 20. 350p |

Student worksheet 49

Here is £1.20

Here is £0.60

To add them up, you can write the pounds and the pence like this:

Here are the pounds	_____	£	1.20	_____	Here are the pence
Add up the pounds	_____		+ 0.60	_____	Add up the pence
			1.80		

Add up the money

1) £

$$\begin{array}{r} 1.25 \\ + 2.05 \\ \hline \end{array}$$

4) £

$$\begin{array}{r} 4.05 \\ + 0.45 \\ \hline \end{array}$$

2) £

$$\begin{array}{r} 2.15 \\ + 0.85 \\ \hline \end{array}$$

5) £

$$\begin{array}{r} 1.95 \\ + 1.15 \\ \hline \end{array}$$

3) £

$$\begin{array}{r} 1.55 \\ + 1.75 \\ \hline \end{array}$$

6) £

$$\begin{array}{r} 2.05 \\ + 1.45 \\ \hline \end{array}$$

Price list



£1.98



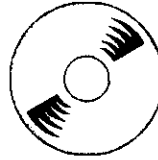
99p



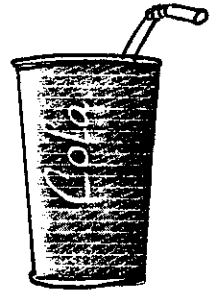
£1.65



£4.89



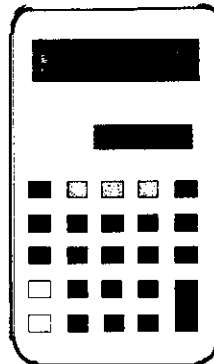
£2.99



£1.15



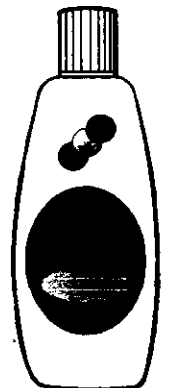
55p



£3.49



£2.50



£2.25

Practical exercise 1
Buying items with the exact amount

This is a role play exercise called 'The Shopping Game'

RULES:

1. Work in pairs. One of you is the shopkeeper the other is the customer.
2. Sit across from each other at the desk.
3. Cut out all the items for sale on the price list sheet(s).
4. Put all the items in front of the shopkeeper.
5. Using the pretend money, the customer buys one item from the shopkeeper, giving the exact amount.
6. The shopkeeper checks the money.
7. The customer buys 10 items in this way.
8. Change places and repeat steps 5 to 8.

Practical exercise 2
Buying items and getting change

This is a role play exercise called 'The Shopping Game'

RULES:

1. Work in pairs. One of you is the shopkeeper the other is the customer.
2. Sit across from each other at the desk.
3. Cut out all the items for sale on the price list sheet(s).
4. Put all the items in front of the shopkeeper.
5. Using the pretend money, the customer buys one item from the shopkeeper in exchange for coins and /or notes. Always give the money to the nearest amount.
6. The shopkeeper checks the money is to the nearest amount.
7. The shopkeeper gives the customer the correct change.
8. The customer checks the change.
9. The customer buys 10 items in this way.
10. Change places and repeat steps 5 to 10.

Student worksheet 50

You have £10.00. You buy a T-shirt for £6.50.
To find out how much change you will get, you can subtract like this:

$$\begin{array}{r} \text{£} \\ 10.00 \\ - 6.50 \\ \hline 3.50 \\ \hline \end{array}$$

How much change will you get? You can use a calculator to help you.

- | | | | |
|---|----------------------|-------|---------------|
| 1 | You have | £5.00 | |
| | You buy a burger for | £2.25 | |
| | | | ----- |
| | You will get | £ | <u>change</u> |
- | | | | |
|----|--------------|-------|---------------|
| 2. | You have | £4.00 | |
| | You buy a CD | £2.75 | |
| | | | ----- |
| | You will get | £ | <u>change</u> |
- | | | | |
|----|-------------------|-------|---------------|
| 3. | You have | £1.75 | |
| | You buy chips for | £1.50 | |
| | | | ----- |
| | You will get | £ | <u>change</u> |
- | | | | |
|----|--------------------|-------|----------------|
| 4. | You have | £5.00 | |
| | You buy sweets for | £2.45 | |
| | | | ----- |
| | You will get | £ | <u>change.</u> |

Outcome 3

Information sheet

This is mainly a practical learning outcome, which involves the pupil measuring various items so the pupil will need to have access to the following measuring devices:

Kitchen scales

Bathroom scales

Tape measure

Ruler

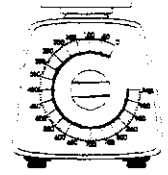
Large measuring jug Medicine measure

The scale on these devices must be metric only. The imperial scale must not appear.

Pupils are not required to select units in which the measurements are made, only to be able to measure the items to a functional degree of accuracy. Therefore, the teacher must instruct each pupil how to set each measuring device to zero and to read the scale on each measuring device.

Student worksheet 51

Put a circle round the correct answer



Measuring Device	Used to Measure
------------------	-----------------

Kitchen scales	weight / length / volume
----------------	--------------------------

Tape measure	weight / length / volume
--------------	--------------------------

Ruler	weight / length / volume
-------	--------------------------

Large measuring jug	weight / length / volume
---------------------	--------------------------

Bathroom scales	weight / length / volume
-----------------	--------------------------

Medicine measure	weight / length / volume
------------------	--------------------------

Student worksheet 52

Look at the list of measuring devices below.
Circle the devices that are used to measure weight.

Measuring Device

Kitchen scales

Tape measure

Ruler

Large measuring jug

Bathroom scales

Medicine measure

Student worksheet 53

Look at the list of measuring devices below.
Circle the devices that are used to measure length

Measuring Device

Kitchen scales

Tape measure

Ruler

Large measuring jug

Bathroom scales

Medicine measure

Student worksheet 54

Look at the list of measuring devices below.
Circle the devices that are used to measure volume

Measuring Device

Kitchen scales

Tape measure

Ruler

Large measuring jug

Bathroom scales

Medicine measure

Student Worksheet 55

Estimating the weight of lighter items.

You will need a set of kitchen scales
Collect these 8 items:

a book	a pencil	an apple	a pen
a feather	a sharpener	a duster	a ball

Which feels heaviest?
Which feels lightest?

Put the 8 items in order from the lightest to the heaviest in grams (g) judging one against the other

- | | |
|----|----|
| 1. | 5. |
| 2. | 6. |
| 3. | 7. |
| 4. | 8. |

Student worksheet 56

The Use of Measuring Device is Correct

Use a set of kitchen scales to check your estimates.

Has it changed the order? Yes / No

If yes write the new order below.

- | | |
|----|----|
| 1. | 5. |
| 2. | 6. |
| 3. | 7. |
| 4. | 8. |

Student worksheet 57

You will need:

- a) set of bathroom scales
- b) 5 school bags, labelled Bag A, Bag B, Bag C, Bag D and Bag E

You are going to estimate the weight of each bag.

What to do:

- a) pick each bag up in turn
- b) which feels heaviest?
- c) which feels lightest?
- d) place the 5 bags in order from lightest to heaviest and enter your results below.

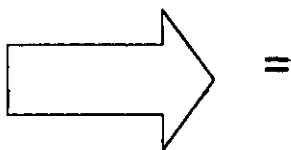
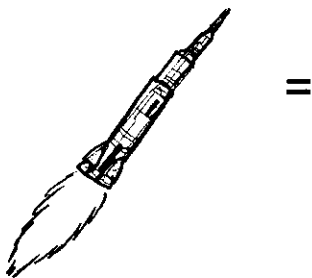
My estimate	After weighing

You are now going to weigh each bag.

Use the set of bathroom scales and weigh each bag. Has the order changed? Enter your results in the table.

Student worksheet 58
Measuring the length of shorter items.

Use a ruler to measure each of these objects.
Write the length of these objects in centimetres.



Student worksheet 59
Measuring the length of longer items.

1. Write your own name and the names of nine of your class mates in the table below.
2. Estimate your own height and the height of your nine classmates in centimetres and write this in the table.
3. Using a tape measure, measure the actual heights of you and your nine classmates in centimetres and write this in the table.

Names	Estimated height	Actual height

Student worksheet 60

You will need a large measuring jug and the containers listed in the table below.

1. Write down, in order, the volume of water you estimate each container can hold. Order from the smallest to the largest. E.g. if you think the milk carton holds the smallest volume of water, put a 1 in the table next to milk carton.
2. Using the measuring jug, measure the water from each container to find the actual order. Again write down the actual order putting a 1 beside the smallest.

	Estimated order	Actual order
Saucepan		
Mug		
Cup		
Drink bottle		
Milk carton		
Glass jar		
Tumbler		
Drink can		
Bowl		
Milk jug		

Student worksheet 61

1. Write your own name and the names of nine of your class mates in the table below.
2. Estimate your own weight and the weight of your nine classmates in kilograms (kg) and write this in the table.
3. Using bathroom scales, weigh yourself and write your weight in the table. Then ask your classmates to weigh themselves and write their weights in the table.

Names	Estimated weight	Actual weight











4. Was the tallest person the heaviest? Yes / no

Student worksheet 62

The use of measuring device is correct.

Use a ruler to measure.

Write the length of these lines in centimetres.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

Student worksheet 63

The use of measuring device is correct.

Use a ruler to measure.

Draw straight lines of the lengths shown:

1. 9.5 cm
2. 5 cm
3. 12 cm
4. 2 cm
5. 10.5 cm
6. 15 cm
7. 6.5 cm
8. 11 cm
9. 4.5 cm
10. 8 cm

Student worksheet 64

Using a tape measure, measure the following items in centimetres (cm) to the nearest half centimetre:

Item	Length in Centimetres
Length of table	
Width of table	
Height of a door	
Width of a window	
Length of a bookcase	
Height of a filing cabinet.	

Using a ruler, draw the following lines:

1. 5.5 cm
2. 4.0 cm
3. 7.0 cm
4. 3.5 cm
5. 10.5 cm
6. 2.0 cm
7. 9.5 cm
8. 6.5 cm

Student worksheet 65

Using kitchen scales, weigh the following items and write down each item's weight in grams (g) to the nearest 50 grams.

Item	Weight in grams
One cup of flour	
2 cups of sugar	
One cup of dried fruit	
2 potatoes	
One orange	
2 onions	

Using bathroom scales, weigh the following items and record each item's weight in kilograms (kg) to the nearest half kilogram.

Item	Weight in kilograms
6 hardback books	
A box of paper	
A desk drawer plus contents	

Student worksheet 66

From a 1 litre container of water, put the following volumes of water into a measuring jug. The volumes must be to the nearest 50 millilitres (ml).

1. 250 ml
2. 500 ml
3. 750 ml
4. 300 ml
5. 450 ml

Using a cup, put the following amounts of water in the measuring jug and record each amount's volume in millilitres (ml) to the nearest 20 millilitres.

1. 2 cups
2. 3 cups
3. 4 cups