



SMP Interact



Key stage 3 assessment sampler

Assessment materials for year 7

Assessment materials for year 8

Assessment materials for year 9

These three packs contain hundreds of high quality assessment items linked to the work in the key stage 3 SMP Interact books, saving your department weeks of preparation.

Each pack contains **photocopiable masters**, five copies of the **teacher's guide** and a **CD-ROM**.

The **photocopiable masters** provide

- pupils' answer sheets for mental question sessions
- assessments for most units in the books
- non-calculator assessments

The **teacher's guide** includes

- teacher's scripts and answers for the mental questions
- answers for the unit assessments and non-calculator assessments
- guidance on national curriculum levels

The **CD-ROM** contains

- the unit assessments and non-calculator assessments as editable Word files, so you can adapt or combine the assessments to meet your school's needs
- the masters for the unit assessments and non-calculator assessments as PDF files – for instant access
- the teacher's guide in PDF format

Minimum system requirements: Adobe Acrobat for the PDF files; Word 2000 running on Windows 98 for the editable Word files.

The year 8 and 9 packs are also compatible with the books numbered 2 and 3 in the original SMP Interact.

In this sampler

For
book

- 7T** Mental questions for units 3–11: teacher's script and answers; pupils' answer sheet
- 7S** Assessment for unit 2 (Symmetry 1): pupils' sheet; answer page (note that, for all unit and non-calculator assessments, an estimated national curriculum level is given in square brackets after each answer)
- 8S** Assessment for unit 19 (No chance!): pupils' sheets
- 8C** Non-calculator assessment for units 9–17: pupils' sheet
- 9T** Assessment for unit 18 (Simplifying): pupils' sheet
- 9S** Mental questions for units 19–25: teacher's script and answers; pupils' answer sheet
- 9C** Assessment for unit 3 (Rates): pupils' sheets

7T/3-11 Mental questions (teacher's script and answers)

Read out each question twice.

Allow about 5 seconds for each of questions 1–5.

- 1 What is 7 multiplied by 8? [56]
- 2 When I multiply a number by 6 I get 42.
What is the number? [7]
- 3 I buy an ice cream for 65p.
How much change do I get from £1? [35p]
- 4 Add together 6 and 8 and 9. [23]
- 5 What is 23 doubled? [46]

Allow about 10 seconds for each of questions 6–15.

- 6 One of the years shown on the sheet is not symmetrical.
Put a ring round it. [2002]
- 7 Look at the angle.
Is it acute, obtuse, reflex or a right angle?
Ring the correct answer. [Obtuse]
- 8 The sheet has a calendar for November and December.
What day of the week is November the 11th on? [Tuesday]
- 9 On the calendar, how many days are there between the 24th of November and the 24th of December, not counting those days? [29 days]
- 10 Which is bigger, three eighths or a half? [$\frac{1}{2}$]
- 11 What are the next two numbers in the number pattern? [275, 250]

- 12 The two angles on the sheet make a straight line.
What size is the missing angle? [50°]
- 13 Write down two whole numbers between 194 and 201. [Two of 195, 196, 197, 198, 199, 200]
- 14 What is 23 add 38? [61]
- 15 You can use doubling to work out 18 multiplied by 4.
What is 18 multiplied by 4? [72]

Allow about 15 seconds for each of questions 16–20.

- 16 The table shows the number of beads used in different bracelets.
How many red beads would be used with 5 black beads? [17]
- 17 Shade in exactly one third of this grid. [3 squares shaded]
- 18 Andrew was born in 1958.
How old was he in the year 2003? [45]
- 19 Work out 740 take away 380. [360]
- 20 Write the fractions on your sheet in order, smallest first. [$\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$]

Name _____

1

2

6 42

3 p

65p

4

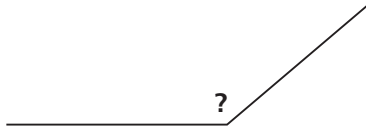
6 8 9

5

23

6 **1881 2002 1001 888**

7



acute obtuse reflex right angle

8

November

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

9

December

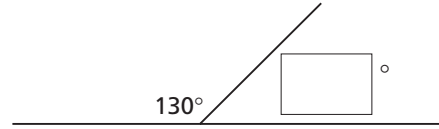
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

10

$\frac{3}{8}$ $\frac{1}{2}$

11 375 350 325 300

12



13

194 201

14

23 38

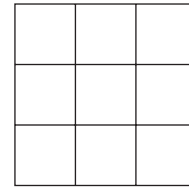
15

18 4

16

Black beads	1	2	3	4
Red beads	5	8	11	14

17



18

1958 2003

19

740 380

20

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{5}{8}$ $\frac{3}{8}$

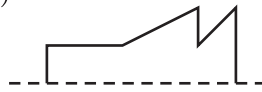
Name _____

1 Complete these symmetrical shapes. The dotted lines are mirror lines.

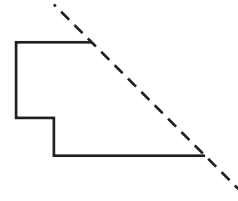
(a)



(b)

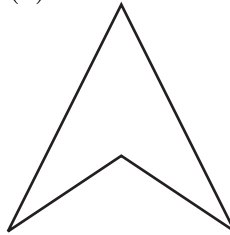


(c)

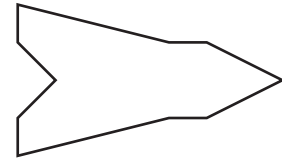


2 Draw the line of symmetry on each of these shapes.

(a)



(b)

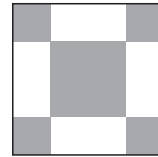


3 Draw all the lines of symmetry on each of these shapes.

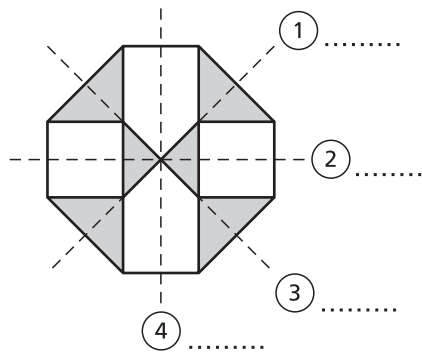
(a)



(b)



4 Which of these are lines of symmetry? Write 'Yes' or 'No' for each.



5 Some personalised number plates are symmetrical. This number plate has two lines of symmetry.



Draw lines of symmetry (if there are any) on these number plates.

(a)



(b)



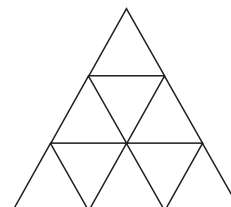
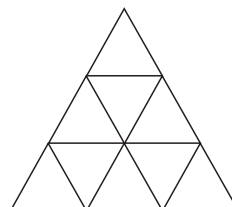
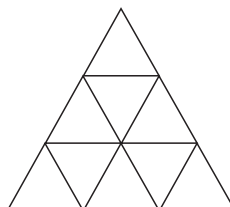
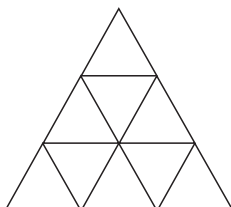
(c)



(d)

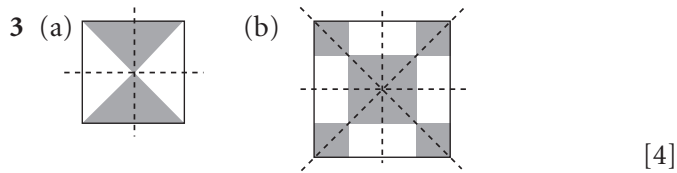
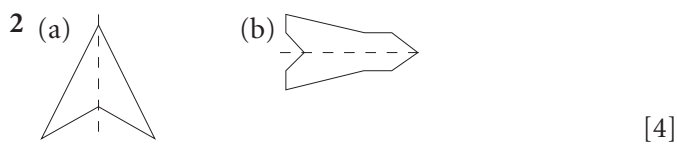


6 Shade these shapes to give four different designs each with three lines of symmetry.

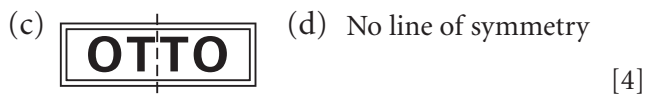
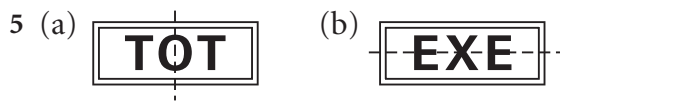


Book 7S: answers and levels for unit assessments

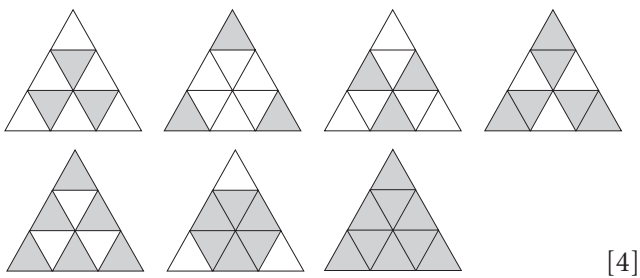
7S/2 Symmetry 1



4 (1) No (2) Yes (3) No (4) Yes [4]



6 Four designs from:



7S/3 Whole number calculation

1 (a) 71 (b) 88 (c) 72 [3]
 (d) 17 (e) 37 (f) 29

2 (a) 83p (b) £1.03 [3]

3 43p [3]

4 (a) 678 [3]
 (b) 185 [3]
 (c) 271 [4]
 (d) 416 [4]
 (e) 167 [4]
 (f) 369 [4]

5 (a) £4.31 [3]
 (b) £2.93 [3]
 (c) £2.88 [4]
 (d) £2.36 [4]

6 (a)

x	5	6	9
2	10	12	18
4	20	24	36
3	15	18	27

(b)

x	6	8	7
5	30	40	35
7	42	56	49
9	54	72	63

 [4]

7 48 [4]

8 (a) 5 [3]
 (b) 4 [4]
 (c) 4 [4]
 (d) 6 [4]
 (e) 9 [3]
 (f) 32 [4]

9 9p [4]

10 (a) 104 (b) 485 (c) 3704 [4]

11 (a) 17 (b) 56 (c) 122 [4]

12 1950 km [4]

13 (a) 8 (b) 4 [4]

14 (a) 22 remainder 3 (b) 31 remainder 2 [4]

15 (a) 43 (b) 2 [4]

16 5 [4]

17 14 [4]

7S/5 Growing patterns

1 12 [3]

2 18 [3]

3 The pupil's design with 2 leaves and 9 berries [4]

Name _____

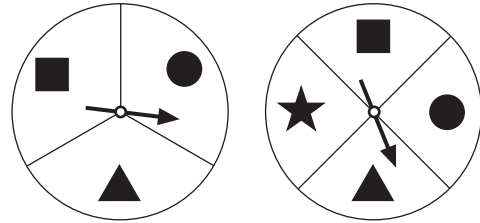
- 1 A box contains red, green and yellow sweets.
The probability of randomly choosing a red sweet is $\frac{4}{9}$.
The probability of choosing a green sweet is $\frac{2}{9}$.

(a) What is the probability of choosing a yellow sweet?

(b) There are 45 sweets in the bag altogether.
How many of the sweets are red?

- 2 A game is played with these two fair spinners.

(a) List all the possible outcomes for how the spinners might land.



1st spinner	2nd spinner

(b) Find the probability that the spinners show

(i) two squares

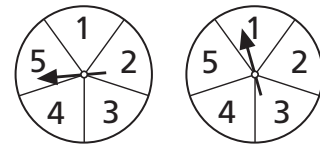
(ii) both symbols the same

(iii) a square and a circle

3 In a game, tiles numbered from 1 to 20 are placed in a bag.
One tile is picked at random.
What is the probability that the tile picked is

- (a) an odd number
- (b) a prime number
- (c) a multiple of 4
- (d) a square number

4 In a game two fair spinners numbered from 1 to 5 are used.
The difference between the two scores is used.



- (a) Complete this table to show the differences for all the possible outcomes.

		1st spinner				
		1	2	3	4	5
2nd spinner	1					4
	2					
	3					
	4					
	5					

- (b) Find the probability that the difference is
 - (i) 0
 - (ii) 2
 - (iii) less than 2

5 Which of these events is more likely? Explain why.

A: Getting two heads when two fair coins are flipped.

B: Getting one odd and one even number when two six-sided dice are thrown.

Do not use a calculator.

Name _____

- 1 Calculate, as a decimal, the gradient of this line.



- 2 Bus fares go up by 15%.
What is the new fare if the old fare is £2.40?

- 3 In a sale, the price of a torch is reduced from £8 to £3.20.
What is the percentage reduction?

- 4 Robbie is taking part in a traffic survey.
He records whether the driver of each passing vehicle is male or female.
Here is his record.

Male									
Female									

Find the relative frequency of male drivers

- (a) as a fraction in its simplest form (b) as a decimal

- 5 Two cuboids are made from identical plastic cubes.
The first cuboid contains 80 cubes and weighs 112 g.
The second contains 25 cubes. How much does it weigh?

Name _____

1 Write each of these in a simpler way.

(a) $p + p + p + p$

(b) $3t + 4t + 2t$

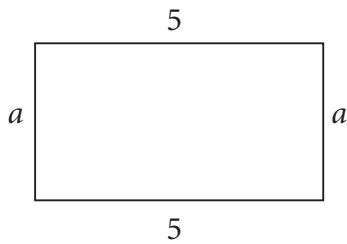
(c) $2x + 5 + 5x - 1$

(d) $4y + 6 + y - 3$

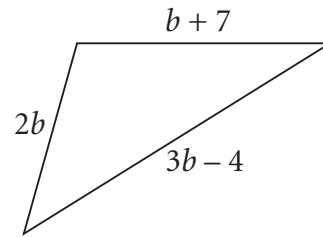
2 Find an expression for the perimeter of each of these shapes.

Write each expression as simply as you can.

(a)

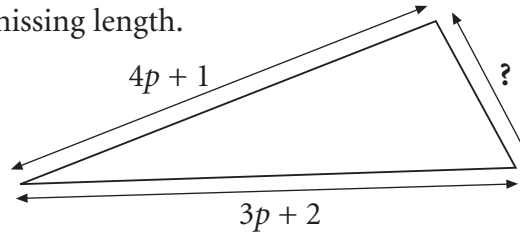


(b)



3 The perimeter of this shape is $8p + 9$.

Find an expression for the missing length.



? =

4 Write each of these in a simpler way.

(a) $8m - m$

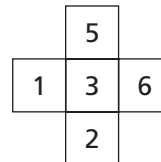
(b) $2k + 6 - k$

(c) $9h + 1 + 2h - 5$

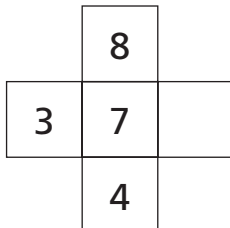
(d) $3n + 2 - n - 3$

5 In an 'addition cross' the three numbers across add up to the same total as the three numbers down.

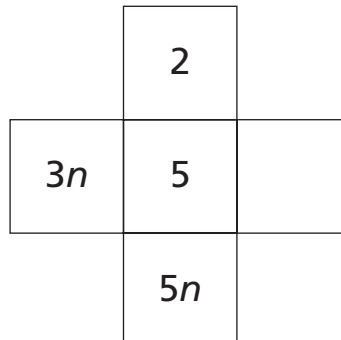
Complete these addition crosses.



(a)



(b)



9S/19–25 (S3/19–25) Mental questions (teacher’s script and answers)

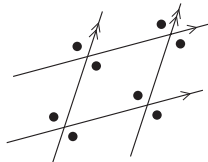
Read out each question twice.

Allow about 5 seconds for each of questions 1–5.

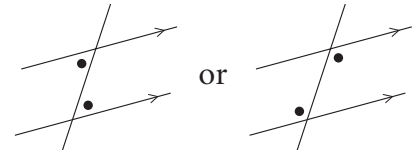
- 1 One of these scatter diagrams shows strong positive correlation.
Draw a ring round it. [D]
- 2 What is the square root of 100? [10]
- 3 A TV programme starts at seven fifteen p.m. and lasts one and a half hours.
At what time will it finish? [8:45 p.m.]
- 4 A door is about two metres high.
About how many feet is this? [6 or 7 ft]
- 5 One of these numbers is between 2.5 and 2.6.
Circle it. [2.53]

Allow about 10 seconds for each of questions 6–15.

- 6 Look at the triangle.
Calculate the marked angle. [65°]
- 7 Work out the mean of these three numbers. [40]
- 8 Look at the triangles.
Use a column vector to describe the translation that maps A to B. $\begin{bmatrix} 4 \\ -1 \end{bmatrix}$
- 9 Look at the equation.
Solve it. [$n = 2$]
- 10 The diagram shows two pairs of parallel lines.
Mark with a dot all the angles that are the same size as the one marked on the diagram.



- 11 Work out one point three multiplied by a thousand. [1300]
- 12 Find fifteen per cent of two thousand pounds. [£300]
- 13 Mark a pair of alternate angles on the diagram.



- 14 Look at squares A and B.
Shade square B so that it shows square A after it has been rotated 90 degrees in a clockwise direction.
- 15 Calculate the missing angle. [110°]

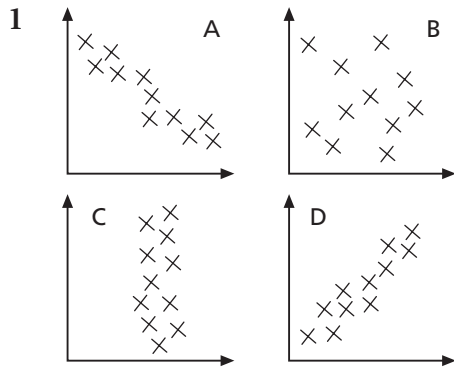


Allow about 15 seconds for each of questions 16–20.

- 16 Find the L-shape that is a reflection of shape P.
Draw a circle round it. [S]
- 17 Work out the square of six thousand. [36 000 000]
- 18 Circle the two numbers that are between nought point nine one and nought point nine three.
[0.92, 0.918]
- 19 Look at squares P and Q.
Complete square Q so that it shows square P after it has been rotated 180 degrees.
- 20 Circle the number that is closest to two divided by nought point six. [3.7]



Name _____



2

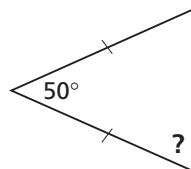
3

7:15 p.m.

4 feet

5 2.7 2.63 2.53 2.11

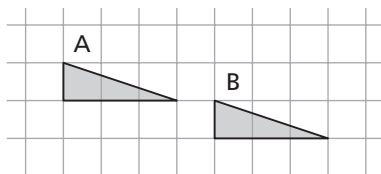
6 °



7

20 50 50

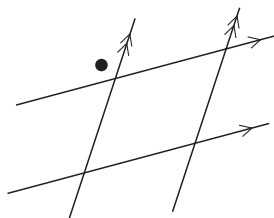
8 []



9 $n =$

$15 - 3n = 4n + 1$

10



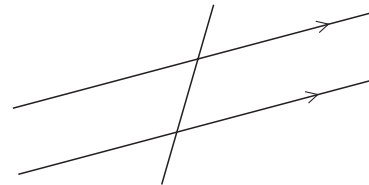
11

1.3

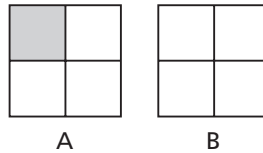
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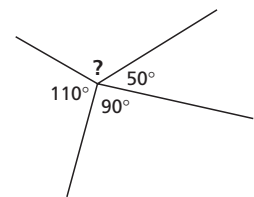
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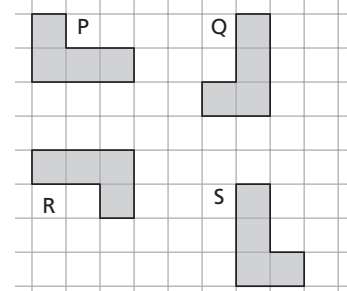
14



15 °



16

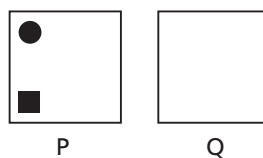


17

6000

18 0.92 0.9 0.94 0.918 0.902

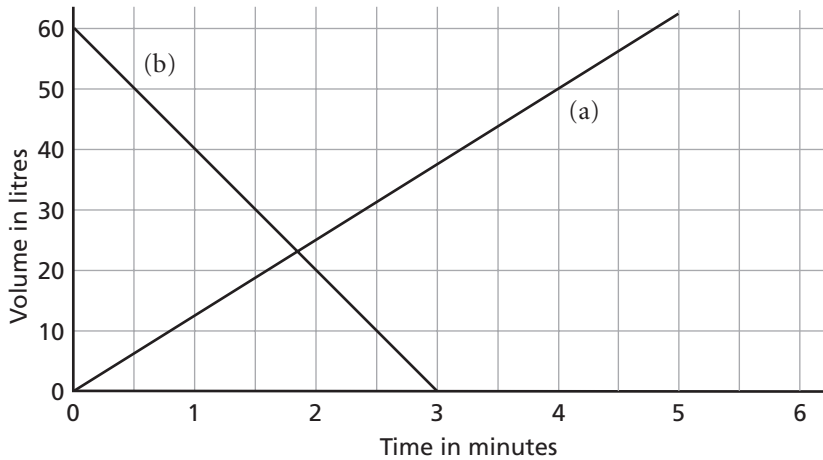
19



20 0.3 2.5 3.7 5.4

Name _____

1 Find the rate of flow for each of these graphs.



(a)

(b)

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2 A tap fills a 15-litre tank in 25 minutes.

(a) What is the rate of flow of the tap in litres per minute?

litres/min

(b) How long, to the nearest minute, will the tap take to fill a 50-litre tank?

minutes

3 Andrea types 288 words in 6 minutes.

How long will she take to type a 2400-word document working at the same rate?

minutes

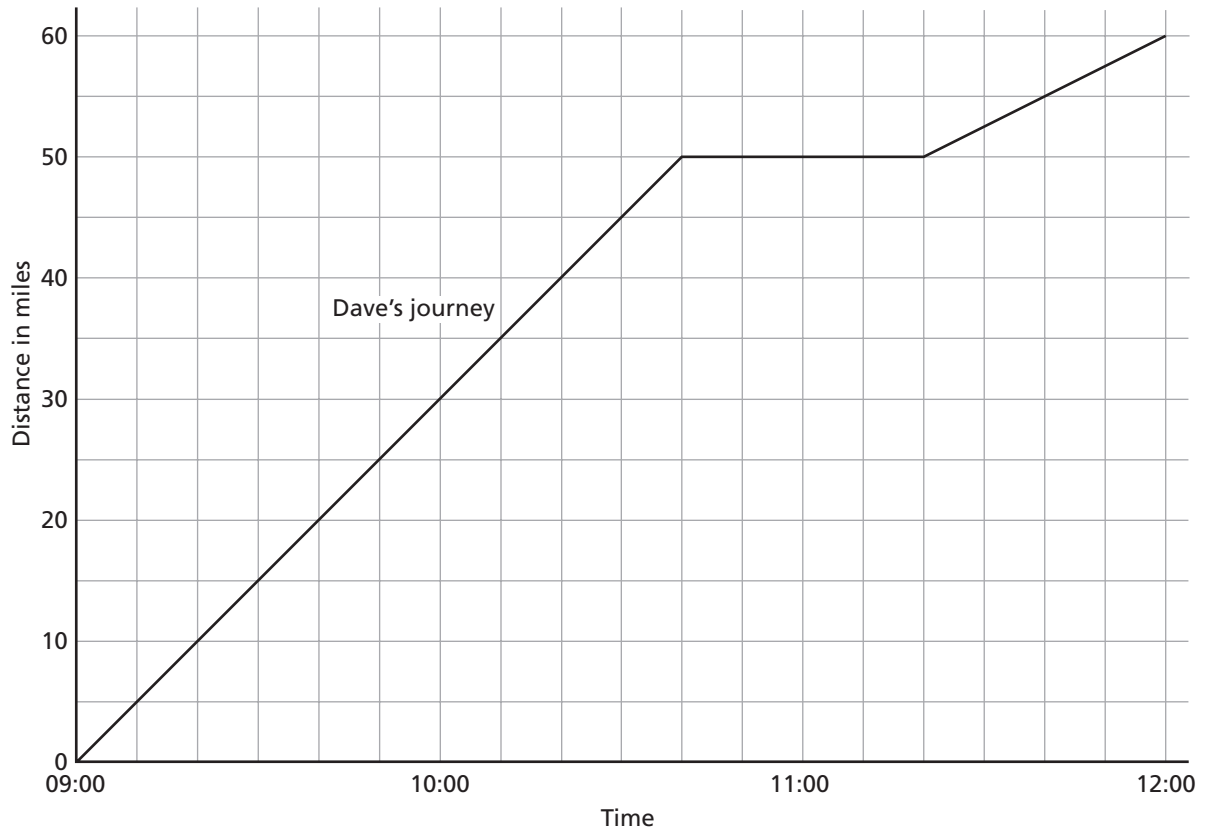
4 A diesel pumping engine uses up fuel at a constant rate.

At 08:30 the quantity of fuel in the engine's tank is 112 litres.

By 10:45 this has gone down to 76 litres.

At what time will the fuel run out?

- 5 Dave sets out from home at 09:00 to drive to a theme park 60 miles away.
The graph below shows his journey.



(a) What was Dave's speed during the first part of his journey?

(b) Dave stopped at a restaurant. How long did he stop for?

(c) What was Dave's speed after he left the restaurant?

Dave's sister Sonia set out from the same home and drove to the theme park.
She drove at 40 m.p.h. and passed Dave just as he was leaving the restaurant.

(d) Draw the graph of Sonia's journey on the grid above.

(e) Use your graph to find the time when Sonia left home.