MATHEMATICS

SAMPLE INTERMEDIATE TEST 3

(40 minutes)

Candidate's Name (in full) .....

Answer all questions in the spaces provided.

Calculators are allowed.

Scrap paper many be used if required.

Examiner only

*Answer **all** questions in the spaces provided.*

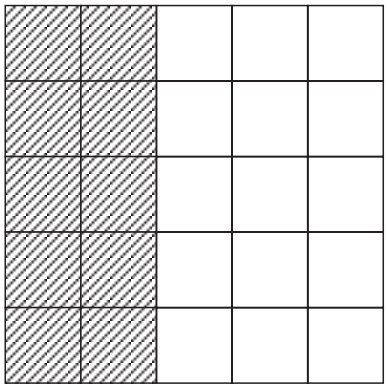
1. Work out the following bills:

2 tapes costing £5.99 each £

3 CDs costing £10.99 each £

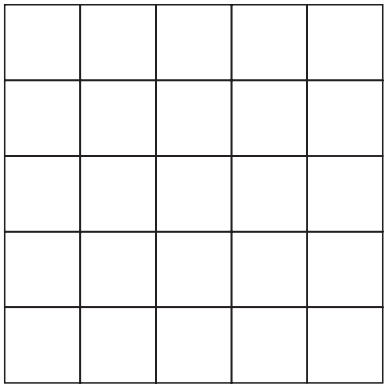
Total cost £ [3]

2. (a)



What percentage (%) of this diagram is shaded? .....

(b)



Shade 80% of this diagram.

[2]

3. Find $\frac{3}{4}$ of 40 kg. .....
[1]

4. Find 20% of £50. .....
[1]

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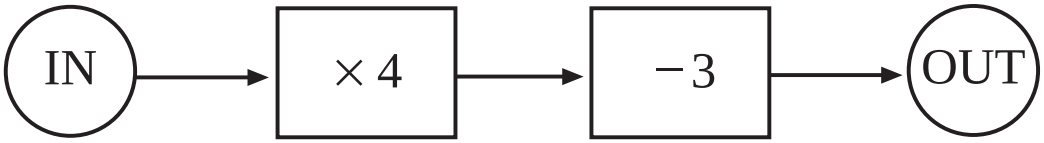
5. This is a number machine.



(a) If the number IN is 5, what is the number OUT?

.....

.....

(b) If the number IN is 20, what is the number OUT?

.....

.....

[2]

6. (a) Write down the next number in this number pattern.

2, 8, 14, 20, ... , ...

Explain how you got your answer.

.....

.....

(b) Write down the next number in this number pattern.

1, 2, 4, 7, ... , ...

Explain how you got your answer.

.....

.....

.....

[4]

Examiner only

7. 40 chairs are to be arranged in a school hall.

There could be

4 rows with 10 chairs in each row.

Write down 2 other ways of arranging the chairs.

..... rows with ..... chairs in each row.

..... rows with ..... chairs in each row.

[2]

8. Rachel has these number cards.

She has made the number 43.7 with her cards.

(a) Use some of the cards to show the number that is 10 times bigger than 43.7.

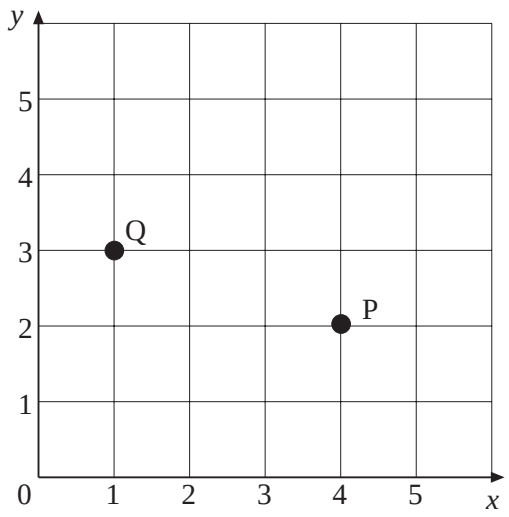
(b) Use some of the cards to show the number that is 100 times bigger than 43.7.

(c) Use some of the cards to show the number that is 500 times bigger than 43.7.

[3]

Examiner only

9.



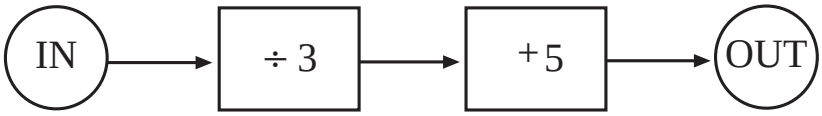
The coordinates of the point P are (4, 2).

The coordinates of the point Q are (..... , ...).

Plot the point R (2, 5) on the grid.

[2]

10. This is a number machine.



If the number In is 6, the number OUT is 7.

(a) If the number OUT is 9, what is the number IN?

.....

.....

(b) If the number OUT is 25, what is the number IN?

.....

.....

[2]

11. There are 49 seats on a coach.
How many coaches are needed for a school trip for 252 pupils and 9 teachers?

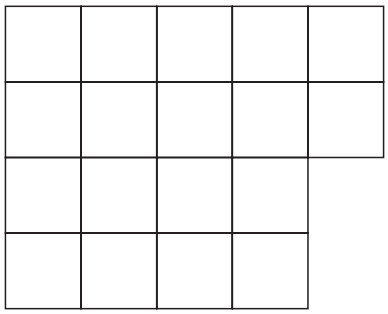
.....

.....

[2]

Examiner only

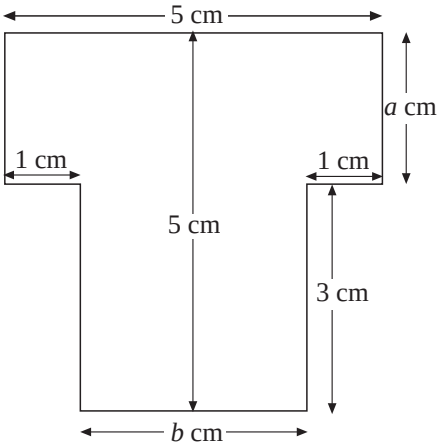
12.



(a) Each small square is a 1 cm square.

What is the *area* of this shape? .....

What is the *perimeter* of this shape? .....



(b) (i) What is the value of a? .....

What is the value of b? .....

(ii) What is the perimeter length of the shape?

.....

.....

.....

[5]

13. Change the following am and pm times into 24-hour times.

(a) 8.30 pm .....

(b) 5.20 am .....

(c) 12.45 am .....

[3]

14. Here is a schedule for Channel 4 programmes one evening.

6.00	Party of Five
6.50	Fresh Pop
7.00	News and Weather
7.55	Deadline 2000
8.00	Brookside
8.30	Chef For A Night
9.00	E R
10.00	Friends
10.30	Whose Line Is It Anyway?
11.00	Jo Whiley
11.45	Bored Stupid
12.15	Film

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(a) How long, in minutes, is 'Fresh Pop'? .....

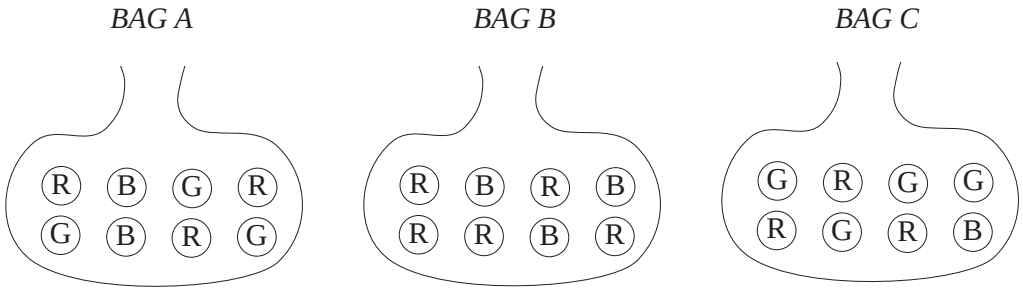
(b) How long, in minutes, is 'Chef For A Night'? .....

(c) How long, in minutes, is 'Bored Stupid'? .....

(d) You start making supper 15 minutes before 'Friends' begins.
At what time do you start making supper? .....

[4]

15. Here are 3 bags of balls. Each ball is coloured RED (R), BLUE (B) or GREEN (G).



The balls in each bag are well mixed. Without looking, you choose one ball from each bag.

(a) From which bag are *you most* likely to get a RED ball? Bag .....

Why?.....

.....

(b) From which bag are you *least likely* to get a BLUE ball? Bag .....

Why?.....

.....

(c) From which bag is there an *even chance* of getting a GREEN ball? Bag .....

Why?.....

.....

[6]

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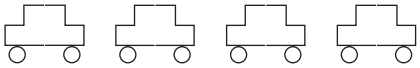
16. The table below shows the number of cars parked in the school car park at lunchtime each day of the week.

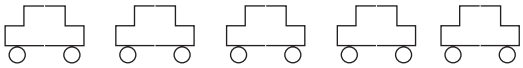
Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
0	16	20	18	22	24	10

Complete the pictogram to illustrate these data.

4 cars are denoted by 

Sunday

Monday 

Tuesday 

Wednesday

Thursday

Friday

Saturday

[4]

17. In a 100 m race between three boys, Bruce, Nigel and Frank, one possible result is

FIRST : *Bruce* SECOND : *Nigel* THIRD : *Frank*

Write down five other possible results for the race.

FIRST ..... SECOND ..... THIRD .....

FIRST ..... SECOND ..... THIRD .....

FIRST ..... SECOND ..... THIRD .....

FIRST ..... SECOND ..... THIRD .....

FIRST ..... SECOND ..... THIRD .....

[2]