

The Haberdashers' Aske's Boys' School
Elstree, Herts

13+ Entrance Test 2008

4th January 2008



MATHS (Paper 1)

Time : 30 Minutes

Calculators ARE NOT allowed

Candidate Name

Candidate Number

1. Write down the next number in each of the sequences:

(a) 1 3 5 7 9

(b) 2 3 7 16 32

(c) 2 3 5 9 17

(d) 2 3 5 8 13

(e) Calculate the 70th term in the sequence 1 3 5 7 9 ..

70th term

2. Write in simplest form:

(a) $8a + b + 3b - 7a - 5b$

.....

(b) $p^2 + pq + 2p^2 - 2qp$

.....

(c) $n^3 \times n^5$

.....

(d) $\frac{4t^2}{10t}$

.....

3. Calculate in simplest form:

(a) $\frac{5}{6} + \frac{2}{7}$

.....

(b) $5\frac{3}{8} - 1\frac{5}{6}$

.....

(c) $3\frac{1}{5} \times 1\frac{1}{4}$

.....

(d) $4\frac{1}{2} \div 1\frac{7}{8}$

.....

4. Solve the equations:

(a) $7x - 9 = 18$

(b) $4(2x - 1) = 6(x + 3)$

(c) $\frac{x}{2} + \frac{1}{4} = \frac{3x}{8}$

.....

5. Complete the tables of values for:

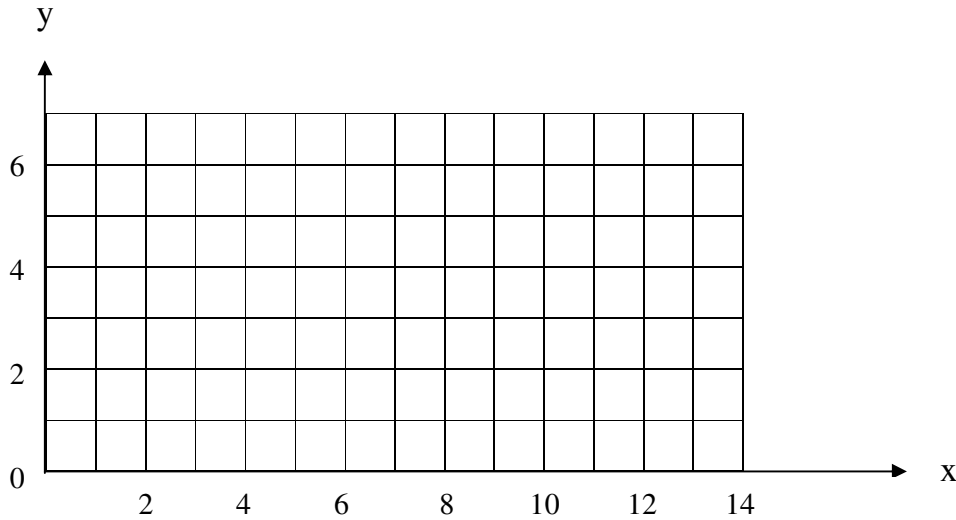
(a) $x + 2y = 12$

x	0			3
y		0	2	

(b) $y = \frac{1}{2}x + 1$

x	0		8	
y		2		6.5

Draw and label both lines on the grid below.

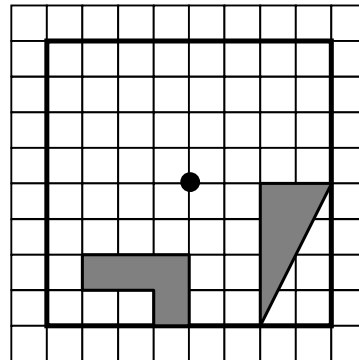
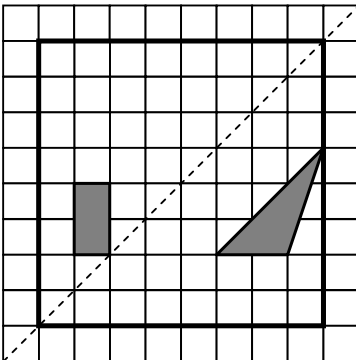


Write down the coordinates of the point where the lines cross.

6. In each of the following diagrams, shade in pencil the least area necessary to give the symmetry described:

(a) Reflection symmetry in the dotted diagonal.

(b) 180° rotational symmetry about the centre.



7. A multiple-choice test consists of 10 questions. Students get 30 marks to start with, then they gain 7 marks for each correct answer, lose 3 marks for each wrong answer and neither gain nor lose if they leave out a question.

(a) What is the maximum possible score

.....

(b) What is the minimum possible score?

.....

(c) John gets 5 questions right, 4 wrong and leaves out 1 question. What is his score?

.....

(d) Jane scored 56 on the test. How many questions did she get right, wrong or leave out?

Right Wrong Left out

END