

# National 5 Past Paper Homework 1

## Paper 1 (non-calculator)

1. Evaluate  $7 \cdot 5 + 1 \cdot 9 \times 4$

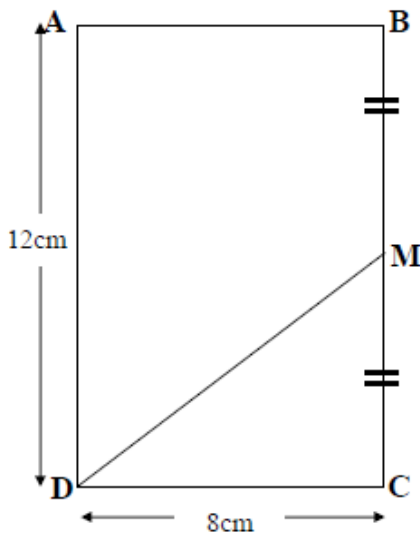
2

2. Solve the equation

$$2x - 4(x - 3) = -8$$

3

3. **ABCD** is a rectangle measuring 8cm by 12cm. **M** is the midpoint of side **BC** as shown in the diagram below.



Calculate the length of **DM**.

4

4. A survey was carried out amongst 400 adults who booked a holiday on-line to find out what type of holiday they had chosen.

The results of the survey are shown in the table below.

Age	Package	Activity	Fly drive	Cruise
40 and under	92	86	18	14
Over 40	45	38	21	86

What is the probability that any adult, chosen at random, would have booked a cruise?  
Give your answer in its simplest terms.

2

Paper 2 (Calculator)

1. Remove the brackets and simplify the following expression.

$$(2x - 3)(3x + 2)$$

2

2. The cost of having a booklet printed by 'TRUEPRINT' depends on the number of pages and the number of booklets to be printed.

The details are shown in the table below.

NUMBER of PAGES	COSTS
Less than or equal to 2	£0.15 for <b>each</b> of the first 300 booklets printed
Greater than 2 pages but less than or equal to 6 pages.	£0.21 for <b>each</b> of the first 300 booklets printed
Greater than 6 pages	£0.29 for <b>each</b> of the first 300 booklets printed
Where the number of booklets to be printed at any one time is <b>greater than 300</b> a charge of £0.12 is made for <b>each additional</b> booklet (for any number of pages).	

(a) Calculate the cost of printing 450 booklets with 4 pages in each.

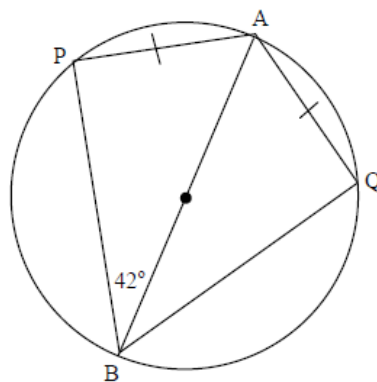
2

(b) Show clearly that the formula for the cost, £C, of having  $b$  booklets printed, where  $b$  is greater than 300 and each booklet consists of 4 pages, can be written as

$$C = 27 + 0.12b$$

3

3. P and Q are points on the circumference of a circle centre O and diameter AB.



If  $\angle ABP = 42^\circ$  and  $AP = AQ$ , calculate the size of  $\angle PAQ$ .

[2]