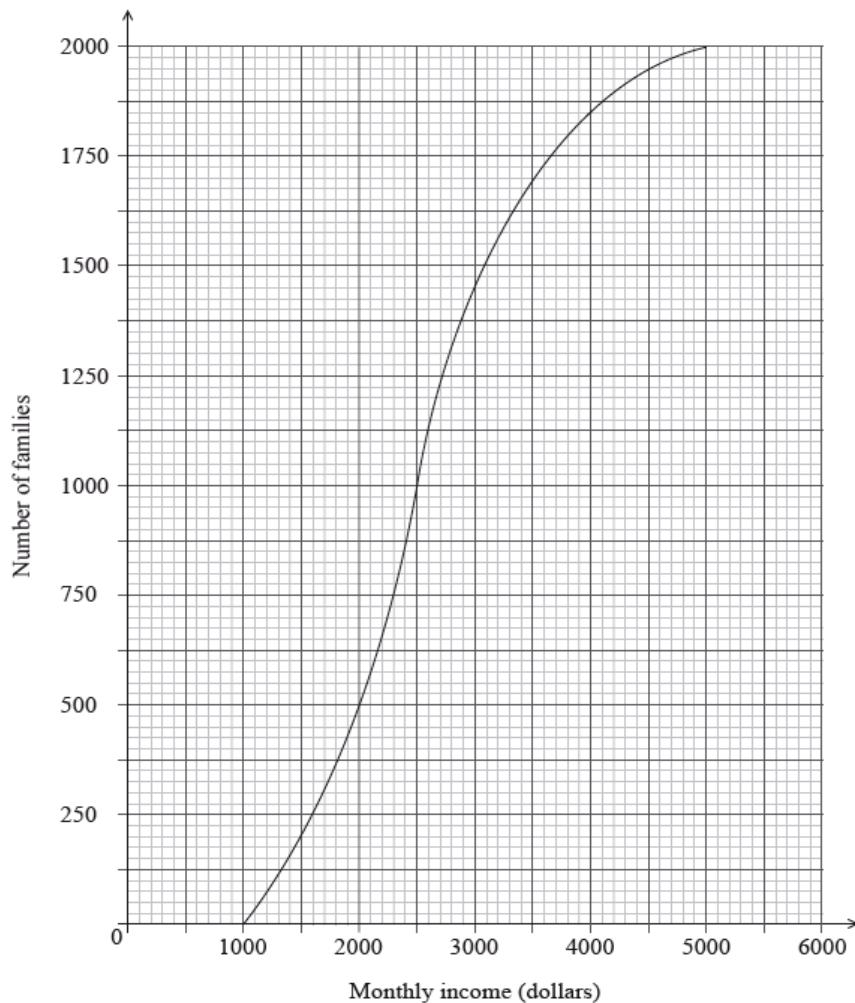


**1a.** The following cumulative frequency graph shows the monthly income,  $I$  dollars, of 2000 families.



Find the median monthly income.

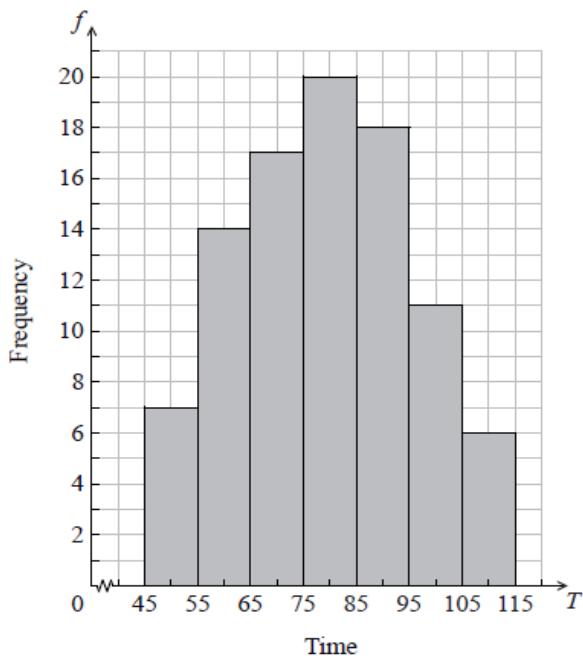
[2 marks]

**1b.** [4 marks]

(i) Write down the number of families who have a monthly income of 2000 dollars or less.

(ii) Find the number of families who have a monthly income of more than 4000 dollars.

- 2a.** The histogram below shows the time  $T$  seconds taken by 93 children to solve a puzzle. [3 marks]



The following is the frequency distribution for  $T$ .

Time	$45 \leq T < 55$	$55 \leq T < 65$	$65 \leq T < 75$	$75 \leq T < 85$	$85 \leq T < 95$	$95 \leq T < 105$	$105 \leq T < 115$
Frequency	7	14	$p$	20	18	$q$	6

- (i) Write down the value of  $p$  and of  $q$ .

- (ii) Write down the median class.

- 2b.** A child is selected at random. Find the probability that the child takes less than 95 seconds to solve the puzzle. [2 marks]

- 2c.** Consider the class interval  $45 \leq T < 55$ .

- (i) Write down the interval width.

- (ii) Write down the mid-interval value.

[2 marks]

- 2d.** Hence find an estimate for the

- (i) mean;

- (ii) standard deviation.

[4 marks]