

- 3 (a) The table shows the numbers of tigers reported to be living in the wild in the year 2014 in some countries.

Country	Number
India	2226
Indonesia	371
Nepal	198
Bangladesh	106

- (i) Using the table,

- (a) find the number of tigers in Nepal as a percentage of the number of tigers in Bangladesh,

..... % [1]

- (b) find the ratio tigers in Bangladesh : tigers in Indonesia : tigers in India, giving your answer in its simplest form.

..... : ..... : ..... [2]

- (ii) Five years later, the number of tigers reported in India was 2967.

Find the percentage increase in the population of tigers in India.

..... % [2]

- (iii) The number of tigers in India in the year 2014 is approximately 30.48% greater than in the year 2010.

Find the number of tigers in India in the year 2010.  
Give your answer correct to the nearest integer.

..... [3]

- (b) At the start of June, a hive has a population of 2000 bees.  
Three months after the start of June the hive has a population of 2662 bees.

The population of this hive can be calculated using the formula

$$P = ab^x,$$

where  $P$  is the population of the hive  $x$  months after the start of June.

By finding the value of  $a$  and the value of  $b$ , calculate the population of the hive 7 months after the start of June.

Give your answer correct to the nearest integer.

..... [5]