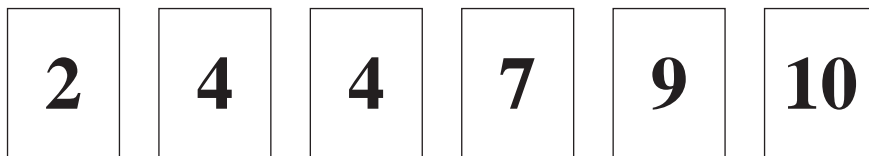


- 4 Ramesh, Maya, Kalil, Chen and Andreia each have a bag containing an identical set of six cards.

There is a number on each of the six cards.
Here are the cards in each of the bags.



Ramesh takes at random **one** of the six cards in his bag.

- (a) Write down the probability that the number on the card Ramesh takes is a prime number.

(1)

Maya takes at random from her bag **two** of the six cards in her bag.

- (b) Find the probability that neither of the two cards has a number **4** on it.

(2)

Kalil takes at random from his bag **two** of the six cards in his bag.

- (c) Find the probability that the total of the two numbers on the cards is 11

(2)

Chen takes at random **one** card at a time, without replacement, from her bag until she gets a card with a number **4** on it. She then stops taking cards from her bag.

- (d) Find the probability that Chen stops taking cards from her bag before she takes the fourth card.

(2)

Andreia puts another card with a number on it into her bag so that she has seven cards in her bag.

The mean of the numbers on the seven cards in Andreia's bag is 8

- (e) Find the value of the number on the card that Andreia put into her bag.

(2)

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Question 4 continued

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Question 4 continued

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(Total for Question 4 is 9 marks)

