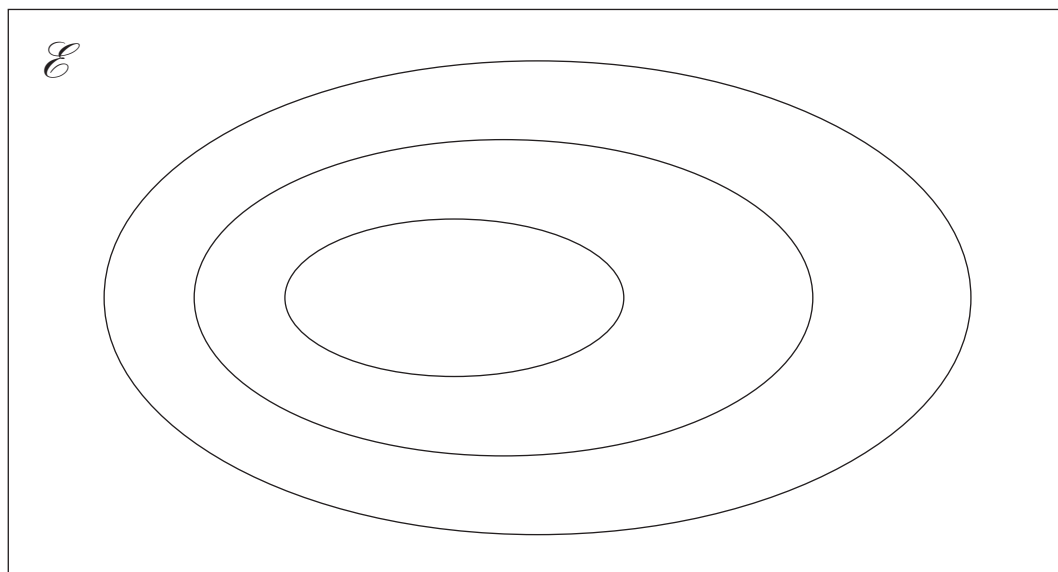


11


 $\mathcal{E} = \{\text{all numbers}\}$ 
 $N = \{\text{natural numbers}\}$ 
 $Q = \{\text{rational numbers}\}$ 
 $Z = \{\text{integers}\}$ 

(a) On the Venn diagram, label the set  $N$ , the set  $Q$  and the set  $Z$ .

(1)

(b) On the Venn diagram, show the four elements

$$4, \sqrt{2}, -3, \frac{2}{3}$$

(2)

(Total for Question 11 is 3 marks)

$$12 \quad \mathbf{A} = \begin{pmatrix} 2 & 1 & 0 \\ 1 & 3 & -1 \\ -2 & 0 & 1 \end{pmatrix} \quad \mathbf{B} = \begin{pmatrix} 3 & 4 \\ 4 & 1 \\ 2 & -2 \end{pmatrix}$$

Calculate the matrix product  $\mathbf{AB}$ .

$$\begin{pmatrix} & \\ & \\ & \end{pmatrix}$$

(Total for Question 12 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

