

STATS1 REVISION SELECTIONS AND ARRANGEMENTS (FROM OCR PAPERS)

6)

i) 4 Rice      6 Main      5 Veg

$$4C_2 \times 6C_3 \times 5C_4 \\ = 6 \times 20 \times 5 = 600$$

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ii) Rice selections including boiled rice =  $1 \times 3C_1 = 3$

$$\text{Total rice selections} = 4C_2 = 6$$

$$\text{Prob (Choose boiled rice)} = \frac{3}{6} = \frac{1}{2}$$

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iii) Combinations including boiled rice but no potatoes

$$3 \times 6C_3 \times 4C_4 \\ = 3 \times 20 \times 1 = 60$$

Combinations excluding boiled rice

$$3 \times 6C_3 \times 5C_4 \\ = 3 \times 20 \times 5 = 300$$

$$\text{Total selections} = 300 + 60 = 360$$

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