

⑦ 42 engineers and 20 others
Choose committee of 5

$$n(S) = 62C5$$

$$n(A) = 42C3 \times 20C2$$

Choose 3 engineers
and 2 others

$$P(A) \approx 0.34$$

⑧ $n(S) = 52C2$

a) 13 diamonds $n(A) = 13C2$

$$P(A) = \frac{13C2}{52C2} \approx 0.06$$

b) 39 non-diamonds $n(A) = 39C2$

$$P(A) = \frac{39C2}{52C2} \approx 0.56$$

⑨ $n(S) = 36 \times 36 \times \dots \times 36 = 36^5$

$$n(A) = 36 \times 35 \times 34 \times 33 \times 32 \text{ or } 36P5$$

$$P(A) = \frac{36P5}{36^5} \approx 0.75$$

$$(10) \quad n(s) = 2 \times 2 \times \dots \times 2 = 2^8$$

$$n(A) = {}_8C_2 + {}_8C_3 + {}_8C_4 = 154$$

exactly
2H

OR

exactly
3H

OR

exactly
4H

↑
Choose which of
the 8 flips are H

$$P(A) = \frac{154}{2^8} \approx 0.60$$