Probability

- $P(A)$: Probability that A hits the target.

$$P(A) = 1/3$$

- $P(A')$: Probability that A does not hit the target.

$$P(A') = 1 - (1/3) = 2/3$$

Probability

- $P(B)$: Probability that B hits the target.

$$P(B) = 1/5$$

- $P(B')$: Probability that B does not hit the target.

$$P(B') = 1 - (1/5) = 4/5$$

Probability

Question 1:

Probability that both hit the target (i.e both A and B hit the target):

$$P(A \cap B) = P(A) \times P(B)$$

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Probability that **only one** person hits the target:

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Probability that **only one** person hits the target:

$$P(A \cap B') + P(A' \cap B)$$

1. Only A hits the target:

$$P(A \cap B') = \frac{1}{3} \times \frac{4}{5} = \frac{4}{15}$$

Question 3:

Probability that **only one** person hits the target:

$$P(A \cap B') + P(A' \cap B)$$

1. Only A hits the target:

$$P(A \cap B') = \frac{1}{3} \times \frac{4}{5} = \frac{4}{15}$$

2. Only B hits the target:

$$P(A' \cap B) = \frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$$

Question 3:

Probability that **only one** person hits the target:

$$P(A \cap B') + P(A' \cap B)$$
$$= \frac{4}{15} + \frac{2}{15}$$
$$= \frac{6}{15}$$