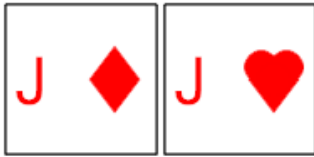


## Probability Union, Intersection, Complement - Cards Example Problem to

### Formula

1 What formula would give you the chance of drawing a card that is both a Jack and red?

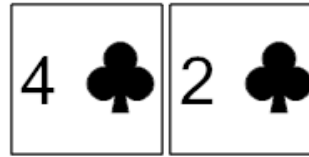


A 
$$\frac{P(J \cap \text{red})}{P(\text{red})}$$

B 
$$P(J) \cdot P(\text{red})$$

C 
$$P(J) + P(\text{red}) - P(J \cap \text{red})$$

2 What formula would give you the chance of drawing a card that is a club, given that it is even?



A 
$$\frac{P(\text{even} \cap \text{clubs})}{P(\text{clubs})}$$

B 
$$\frac{P(\text{clubs} \cap \text{even})}{P(\text{even})}$$

C 
$$P(\text{clubs}) + P(\text{even}) - P(\text{clubs} \cap \text{even})$$



3 What formula would give you the chance of drawing a card that is a diamond or over 8?



A 
$$P(\text{diamonds}) \cdot P(\text{over } 8)$$

B 
$$1 - P(\text{diamonds})$$

C 
$$P(\text{diamonds}) + P(\text{over } 8) - P(\text{diamonds} \cap \text{over } 8)$$

4 What formula would give you the chance of drawing a card that is a diamond, given that it is under 10?



A 
$$P(\text{diamonds}) + P(\text{under } 10) - P(\text{diamonds} \cap \text{under } 10)$$

B 
$$1 - P(\text{diamonds})$$

C 
$$\frac{P(\text{diamonds} \cap \text{under } 10)}{P(\text{under } 10)}$$



5 What formula would give you the chance of drawing a card that is under 6 or over 4?



A 
$$1 - P(\text{under } 6)$$

B 
$$P(\text{under } 6) + P(\text{over } 4) - P(\text{under } 6 \cap \text{over } 4)$$

C 
$$\frac{P(\text{under } 6 \cap \text{over } 4)}{P(\text{over } 4)}$$

6 What formula would give you the chance of drawing a card that is both even and over 4?



A 
$$P(\text{even}) \cdot P(\text{over } 4)$$

B 
$$1 - P(\text{even})$$

C 
$$\frac{P(\text{even} \cap \text{over } 4)}{P(\text{over } 4)}$$



7 What formula would give you the chance of drawing a card that is both over 8 and under 10?



A 
$$\frac{P(\text{over } 8 \cap \text{under } 10)}{P(\text{under } 10)}$$

B 
$$P(\text{over } 8) \cdot P(\text{under } 10)$$

C 
$$P(\text{over } 8) + P(\text{under } 10) - P(\text{over } 8 \cap \text{under } 10)$$

8 What formula would give you the chance of not drawing a card that is a diamond?



A 
$$P(\text{diamonds}) \cdot P(\text{diamonds})$$

B 
$$1 - P(\text{diamonds})$$

C 
$$P(\text{diamonds}) + P(\text{diamonds}) - P(\text{diamonds} \cap \text{diamonds})$$

