Probability of Simple Event Total points = 33

- 1. a. P(two heads) =
 - b. P(at least two heads) = P(2 heads) + P(3heads) ✓ $= \frac{3}{8} + \frac{1}{8} \checkmark$ $= \frac{4}{8} \checkmark = \boxed{\frac{1}{2}}$
 - c. P(no tail) = $\frac{7}{8}$
- a. P(sum of five) = $\frac{4}{36}$ \checkmark = $\left[\frac{1}{9}\right]$
 - b. $P(\overline{sum} \text{ is prime})$ = P(sum is 2) + P(sum is 3) + P(sumis 5) + P(sum is 7) + P(sum is 11) \checkmark = $\frac{1}{36} + \frac{2}{36} + \frac{4}{36} + \frac{6}{36} + \frac{2}{36} \checkmark$ = $\frac{15}{36} \checkmark = \frac{5}{12} \checkmark$
 - c. P(sum greater than 9) = P(sum is 10) +P(sum is 11) + P(sumis 12) \checkmark $= \frac{3}{36} + \frac{2}{36} + \frac{1}{36}$ $= \frac{6}{36} \checkmark = \boxed{\frac{1}{6}} \checkmark$

- d. P(a double) = $\frac{6}{36}$ \checkmark P(not a double) = 1− P(a double) ✓ $=1-\frac{1}{5}$ = $\frac{5}{6}$
- 3. a. P(red number card) $=\frac{18}{52}\checkmark=\boxed{\frac{9}{26}}$
 - b. P(heart) $= \frac{13}{52} \checkmark = \frac{1}{13} \checkmark$ P(not a heart) $= 1 - P(heart) \checkmark$ $= 1 - \frac{1}{13} \checkmark$ $= \boxed{\frac{12}{13}} \checkmark$ c. P(black ace)
 - $=\frac{2}{52}\checkmark=\boxed{\frac{1}{26}}$
- 4. a. P(M) $\frac{2}{11}$ b. P(first half of
 - alphabet) 8 11 ✓ c. P(C) $= \frac{1}{11}$

Probability of Simple Event Total points = 33

- 1. a. P(two heads) = b. P(at least two heads) = P(2 heads) + P(3heads) ✓ $=\frac{3}{8}+\frac{1}{8}$
 - c. $P(\text{no tail}) = \frac{7}{8}$
 - a. P(sum of five) = $\frac{4}{36}$ \checkmark = $\left[\frac{1}{9}\right]$ b. P(sum is prime) = P(sum is 2) +
 - P(sum is 3) + P(sumis 5) + P(sum is 7) + P(sum is 11) \checkmark = $\frac{1}{36} + \frac{2}{36} + \frac{4}{36} + \frac{6}{36} + \frac{2}{36} \checkmark$ = $\frac{15}{36} \checkmark = \frac{5}{12} \checkmark$
 - c. $P(sum\ greater\ than\ 9)$ = P(sum is 10) +P(sum is 11) + P(sumis 12) \checkmark $= \frac{3}{36} + \frac{2}{36} + \frac{1}{36} \checkmark$ $= \frac{6}{36} \checkmark = \boxed{\frac{1}{6}} \checkmark$

- d. P(a double) = $\frac{6}{36}$ \checkmark $P(\overline{not} \text{ a double})$ $=1-P(a double) \checkmark$ $=1-\frac{1}{6}$ $=\frac{5}{6}$ 3. a. P(red number card)
 - $=\frac{18}{52}\checkmark=\boxed{\frac{9}{26}}$ b. P(heart) $= \frac{13}{52} \checkmark = \frac{1}{13} \checkmark$ P(not a heart) $= 1 - P(heart) \checkmark$ $= 1 - \frac{1}{13} \checkmark$ $= \frac{12}{13} \checkmark$ c. P(black ace)
- c. P(black ace) $=\frac{2}{52}\checkmark=\boxed{\frac{1}{26}}$ 4. a. P(M)
- 2 11 b. P(first half of alphabet) $= \boxed{\frac{8}{11}} \checkmark$
 - c. P(C) 1

Probability of Simple Event

Total points = 33

- 1. a. P(two heads) = 8
 - b. P(at least two heads) = P(2 heads) + P(3)heads) \checkmark $= \frac{3}{8} + \frac{1}{8} \checkmark$ $=\frac{4}{8}\checkmark=\boxed{\frac{1}{2}}$
- 2. a. P(sum of five) = $\frac{4}{36}$ = $\left[\frac{1}{9}\right]$
 - b. P(sum is prime) = P(sum is 2) +P(sum is 3) + P(sumis 5) + P(sum is 7) +P(sum is 7) P(sum is 11) \checkmark = $\frac{1}{36} + \frac{2}{36} + \frac{4}{36} + \frac{6}{36} + \frac{2}{36}$ = $\frac{15}{36}$ \checkmark = $\frac{5}{12}$ \checkmark
 - c. P(sum greater than 9) = P(sum is 10) + P(sum is 12) \checkmark = $\frac{3}{36} + \frac{2}{36} + \frac{1}{36} \checkmark$ = $\frac{6}{36} \checkmark = \boxed{\frac{1}{6}} \checkmark$ P(sum is 11) + P(sum

- d. P(a double) = $\frac{6}{36}$ \checkmark P(not a double) = 1− P(a double) ✓ = $\left[\frac{5}{6}\right]$ \checkmark
- 3. a. P(red number card) $=\frac{18}{52} \checkmark = \boxed{\frac{9}{26}}$
 - b. P(heart) $= \frac{13}{52} \checkmark = \frac{1}{13} \checkmark$ P(not a heart) $= 1 - P(heart) \checkmark$ $= 1 - \frac{1}{13} \checkmark$ $= \frac{12}{13} \checkmark$ c. P(black ace)
- 4. a. P(M) $\left[\frac{2}{11}\right]$
 - b. P(first half of alphabet) 8 $\overline{11}$
 - c. P(C) $\frac{1}{11}$

Probability of Simple Event

Total points = 33

a. $P(two heads) = \frac{3}{8}$ b. P(at least two heads) = P(2 heads) + P(3)

$$= P(2 \text{ heads}) + P(3 \text{ heads}) \checkmark$$

$$= \frac{3}{8} + \frac{1}{8} \checkmark$$

$$= \frac{4}{8} \checkmark = \boxed{\frac{1}{2}} \checkmark$$

c. P(no tail) = $\frac{7}{8}$ 2. a. P(sum of five) = $\frac{4}{36}$ \checkmark

b. P(sum is prime)
= P(sum is 2) +
P(sum is 3) + P(sum is 5) + P(sum is 7) +
P(sum is 11)
$$\checkmark$$

= $\frac{1}{36} + \frac{2}{36} + \frac{4}{36} +$
 $\frac{6}{36} + \frac{2}{36} \checkmark$
= $\frac{15}{36} \checkmark = \boxed{\frac{5}{12}} \checkmark$

c. P(sum greater than 9) = P(sum is 10) + P(sum is 11) + P(sum

$$|P(\text{sum is }11) + P(\text{sis }12) \checkmark$$

$$= \frac{3}{36} + \frac{2}{36} + \frac{1}{36} \checkmark$$

$$= \frac{6}{36} \checkmark = \boxed{\frac{1}{6}} \checkmark$$

- d. P(a double) = $\frac{6}{36}$ \checkmark P(not a double) = 1− P(a double) ✓ = $\left[\frac{5}{6}\right]$ \checkmark
- 3. a. P(red number card) $=\frac{18}{52} \checkmark = \boxed{\frac{9}{26}}$
- b. P(heart) $= \frac{13}{52} \checkmark = \frac{1}{13} \checkmark$ P(not a heart) F(flot a fleart) $= 1 - P(heart) \checkmark$ $= 1 - \frac{1}{13} \checkmark$ $= \frac{12}{13} \checkmark$ c. P(black ace) $=\frac{2}{52}\checkmark=\boxed{\frac{1}{26}}$
- 4. a. P(M) $\left[\frac{2}{11}\right]$ b. P(first half of alphabet)
 - 8 11 c. P(C) $\frac{1}{11}$