

## MATH 6 PROBABILITY REVIEW ANSWERS

- (a)  $3/8$   
(b)  $1/2$   
(c)  $1/8$
- (a)  $1/6$   
(b)  $2/3$
- $3/10$
- $2/15$
- $1 - 37/190$
- $[2\binom{48}{9} - \binom{44}{5}]/\binom{52}{13}$
- $10/19$
- $2^{50}/\binom{100}{50}$
- $1/6^{n-1}$
- $7!/(7^7)$ ;  $1/7^6$
- $6!/(6^6)$
- $\binom{k}{2} \cdot 365 \cdot 364 \cdots (365 - (k - 2))/(365^k)$
- $\binom{11}{3}/\binom{47}{3}$
- $4/47$
- $2/\binom{47}{2}$ ;  $[(\binom{10}{2} - 2)]/\binom{47}{2}$
- $[(\binom{16}{3} \cdot \binom{4}{2} + \binom{16}{4} \cdot \binom{8}{1} + \binom{16}{5})]/\binom{52}{5}$
- $\binom{5}{3} \cdot [\binom{4}{2}]^3 \cdot \binom{3}{1} \cdot \binom{4}{2} \cdot \binom{2}{1} \cdot \binom{4}{1}/\binom{52}{9}$
- $\binom{32}{13} : \binom{52}{13} - \binom{32}{13}$
- $2^8 \cdot \binom{32}{4}/\binom{48}{12}$