1) $P(king\ and\ a2) = P(king) * P(a2) = \frac{1}{7} * \frac{1}{7} = \frac{1}{49}$

*There is 1 king and 7 pieces left(queen on a1) so $P(king) = \frac{1}{7}$

*There is 8 spaces at all but 7 left after queen so $P(a2) = \frac{1}{7}$

2) $P(knight\ and\ a2) = P(knight) * P(a2) = \frac{2}{7} * \frac{1}{7} = \frac{2}{49}$

*There is 8 spaces at all but 7 left after queen so $P(a2) = \frac{1}{7}$

*There is 2 knights and 7 pieces left after queen so $P(knight) = \frac{2}{7}$

3)$P(knight\ and\ a1) = 0$

* a1 is already taken by queen