Probability of Dependent and Independent Events

Total points = 21

Problem Set

A.

1. Independent events ✓
2. Dependent events ✓
3. Dependent events ✓
4. Independent events ✓
5. Dependent events ✓

B.

1. P(milk chocolate and white chocolate) ✓
   $= P(\text{milk chocolate}) \cdot P(\text{white chocolate}|\text{milk chocolate})$ ✓
   $= \frac{10}{24} \cdot \frac{6}{23}$ ✓
   $= \boxed{\frac{5}{46}}$ ✓
2. P(stuffed animal and stuffed animal) ✓
   $= P(\text{stuffed animal}) \cdot P(\text{stuffed animal}|\text{stuffed animal})$ ✓
   $= \frac{8}{23} \cdot \frac{7}{22}$ ✓
   $= \boxed{\frac{28}{253}}$ ✓
3. P(blue pen and blue pen) ✓
   $= P(\text{blue pen}) \cdot P(\text{blue pen})$ ✓
   $= \frac{3}{9} \cdot \frac{2}{9}$ ✓
   $= \boxed{\frac{2}{27}}$ ✓
4. P(black and yellow) ✓
   $= P(\text{black}) \cdot P(\text{yellow})$ ✓
   $= \frac{6}{21} \cdot \frac{4}{21}$ ✓
   $= \boxed{\frac{8}{147}}$ ✓

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