

PS 7-2

1. a. $\frac{5}{15} = \frac{1}{3}$ b. $\frac{12}{15} = \frac{4}{5}$ c. $\frac{8}{15}$

2. (5,5)(6,4)(4,6)(5,6)(6,5)(6,6) $\frac{6}{36} = \frac{1}{6}$

3. 10D and 20N = $\frac{10}{30} = \frac{1}{3}$

4. a. $\frac{9}{26}$ b. $1 - \frac{7}{26} = \frac{19}{26}$

5. $\frac{2(\pi \cdot 2^2)}{64} = \frac{8\pi}{64} = \frac{\pi}{8} \approx 0.39$

6. $\frac{1}{7C_2} = \frac{1}{\frac{7 \cdot 6}{2}} = \frac{1}{21}$

7. a. $\frac{4C_3}{12C_3} = \frac{4}{\frac{12 \cdot 11 \cdot 10}{3 \cdot 2}} = \frac{4}{220} = \frac{1}{55}$ b. $\frac{3C_1 \cdot 9C_2}{220} = \frac{3 \cdot \frac{9 \cdot 8}{2}}{220} = \frac{108}{220} = \frac{27}{55}$

8. $\frac{1}{6!} = \frac{1}{720}$

9. $\frac{4C_3}{\text{all red}} + \frac{3C_3}{\text{all green}} = 4 + \frac{5 \cdot 4}{2} = 14$

10. $15P_3 = 15 \cdot 14 \cdot 13 = 2730$