

13.  $P(\text{odd \#}) = 40\%$     150 total

$P(\text{even \#}) = 100 - 40\% = 60\%$      $0.60 \cdot 150 = 90$  balls w/  
even \#s

14.  $P(V \text{ and } V \text{ and } V) = \frac{3}{7} \cdot \frac{4}{11} \cdot \frac{3}{7} = 0.06679 \approx 6.68\%$   
Independent

15.  $P(5 \text{ or } 6) = \frac{4}{52} + \frac{4}{52} = \frac{8}{52} = \frac{2}{13}$   
mutually exclusive

16.  $P(\text{Heart or Even}) = P(\text{Heart}) + P(\text{Even}) - P(\text{Both})$   
inclusive                       $= \frac{13}{52} + \frac{20}{52} - \frac{10}{52} = \frac{23}{52}$

17. Independent

$P(\text{right side of head}) = 90\%$

$P(\text{dress fashionably}) = 25\%$

$\boxed{22.5\%}$

$P(\text{right side and dress fashionably})$   
 $= P(\text{right side}) \cdot P(\text{dress fashionably})$   
 $= 0.90 \cdot 0.25 = 0.225$

18.  $P(\text{text} | \text{lunch}) = \frac{P(\text{text and lunch})}{P(\text{lunch})}$

conditional probability

$P(\text{no lunch}) = 45\% \Rightarrow P(\text{lunch}) = 55\%$

$P(\text{text} | \text{lunch}) = 80\%$

$P(\text{text and lunch}) = P(\text{lunch}) \cdot P(\text{text} | \text{lunch})$   
 $= 0.55 \cdot 0.80 = 0.44$      $\boxed{44\%}$