

$$23. \text{ Outcomes} = 2^3$$

$$= 8$$

H H H  
 H H T  
 H T H  
 H T T  
 T H H  
 T H T  
 T T H  
 T T T

$$P(\text{losing game}) = \frac{6}{8}$$

$$= \frac{3}{4}$$

$$24. P(\text{no } 5) = \frac{25}{36}$$

$$P(\text{at least one } 5) = \frac{11}{36}$$

$$25. \text{ no.}$$

$$\text{total outcomes} = 2^2$$

$$= 4$$

H H  
 H T  
 T H  
 T T

$$P(1H, 1T) = \frac{2}{4}$$

$$= \frac{1}{2}$$

$$P(2H) = P(2T) = \frac{1}{4}$$