

BE-Precalc Wednesday 1-20-10

① 12 players on a basketball team, how many possible teams can be formed? Assume any player can play any position.

• Homework review: Pg 843 #5, 7-14.

Answers:

⑤ 300 ⑦ 720 ⑧ 60

⑨ 55,440 ⑩ 35 ⑪ 15,504

⑫ 40

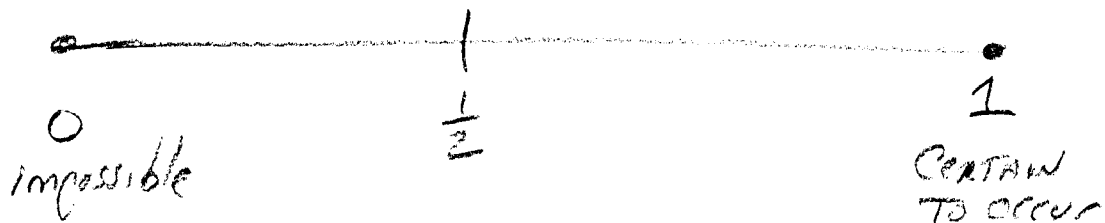
⑬ 3,628,800

$$\begin{aligned} \textcircled{14} \quad {}^{15}P_9 &= \frac{15!}{(15-9)!9!} = \frac{15!}{6!9!} = \frac{\overset{1}{3} \cdot \overset{1}{7} \cdot \overset{1}{3} \cdot \overset{5}{15} \cdot 14 \cdot 13 \cdot 12 \cdot 11 \cdot 10}{\underset{3}{6} \cdot \underset{1}{5} \cdot \underset{1}{4} \cdot \underset{1}{3} \cdot \underset{1}{2} \cdot 1} \\ &= 7 \cdot 13 \cdot 11 \cdot 5 = \boxed{5005} \end{aligned}$$

Ch. 13-3 Probability and Odds

The Probability of an event

$$P(\text{event}) = \frac{\text{Number of possible "successes"}}{\text{Total number of possible events}}$$



$$P(\text{heads}) = \frac{1}{2}$$

$$P(\text{tails}) = \frac{1}{2}$$

$$P(\text{heads or tails}) = \frac{2}{2} = 1$$

$$P(\text{heads and tails}) = \frac{0}{2} = 0$$

$$P(3 \text{ heads in a row}) = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$$

FIRST TOS	SECOND TOS	THIRD	OUTCOME
		H	HHH
		T	HHT
		H	HTH
		T	HTT
		H	THT
		T	THT
		H	TTH
		T	TTT

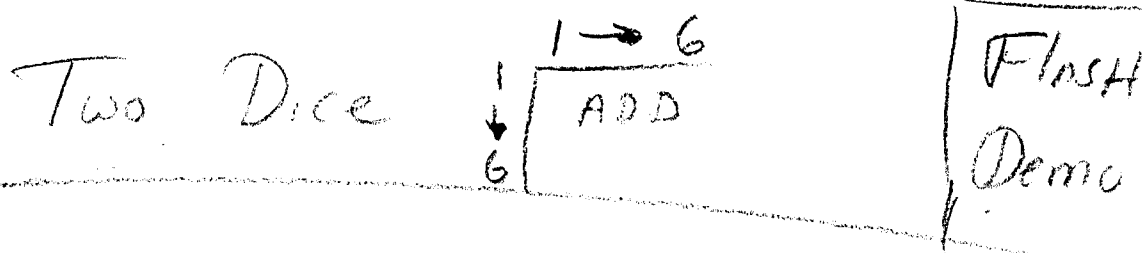
$\frac{1}{8}$

$$P(\text{success and failure}) = 1$$

Tip: Find Total First

Ex 2 Pg 853

Std Deck of Cards



Homework: Pg. 856 # 13-25