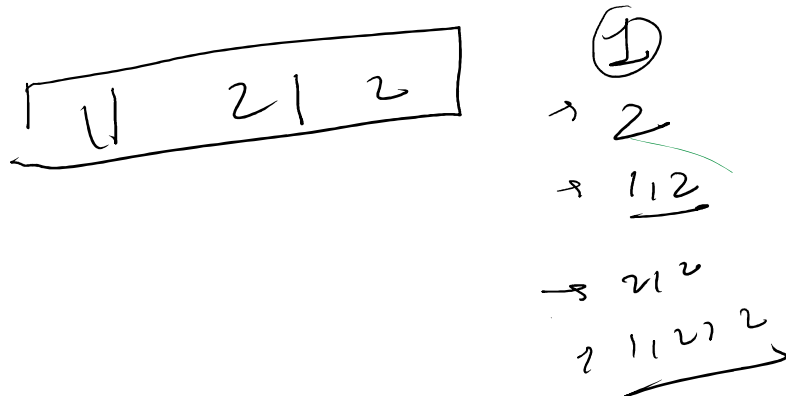
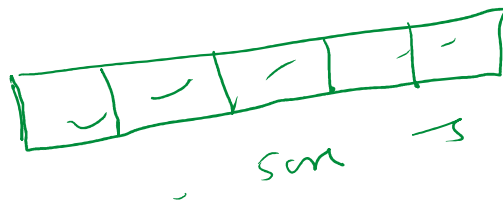


Q) you have a gold rod. You have an employee. you have to pay the employee by the equal portion of the rod every day.  
How many minimum cuts are needed to pay the employee



$$P(E) \Rightarrow \frac{\text{Favourable no. of outcomes}}{\text{Total no. of outcomes}}$$

# Basic Probability

Q) Probability of getting an even number on a dice throw.

Sol:

$$\frac{3}{6}$$

$$\frac{(2, 4, 6)}{(1, 1, 2, 3, 4, 5, 6)}$$

Sol<sup>n</sup>

$$\frac{3}{6}$$

$$\frac{(1, 2, 3, 4, 5, 6)}{(1, 2, 3, 4, 5, 6)}$$

Q) Prob of getting a number greater than 4 on a dice throw

Sol<sup>n</sup>

$$\frac{2}{6} = \frac{1}{3}$$

Q) Two dice together. Probability of getting a sum of 10

Sol<sup>n</sup>

$$6 \left[ (1, 1, 1) (1, 1, 2) (1, 1, 3) (1, 1, 4) (1, 1, 5) (1, 1, 6) \right]$$

$$\left[ (1, 1, 1) (2, 2) \dots \right]$$

$$\left( \frac{31}{36} \right)$$

$$\left( \frac{4}{36} \right)^2 = \frac{1}{9}$$

$$(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)$$

identical  $\left( \frac{1}{3} \right) \left( \frac{1}{3} \right)$

$$\rightarrow 2 \times 2 \times 2$$

Q) Find the probability of getting all heads or all tail on a throw of 4 coins

$$\left( \frac{1}{16} \right) + \left( \frac{1}{16} \right) = \frac{2}{16} = \frac{1}{8}$$

or all +

$$2^4 = \frac{2^4}{16} = \frac{1}{8}$$

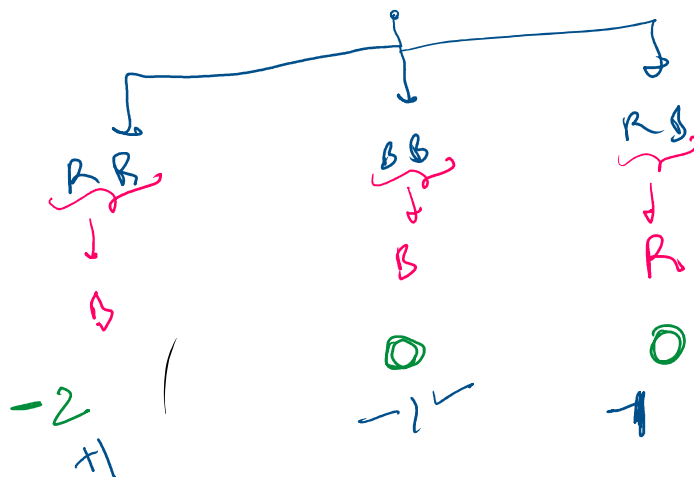
Q) You have a bag which contains 20 red balls and 16 blue balls.

→ You can take out two balls in one step

→ If they are of same color, replace them by a blue ball

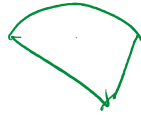
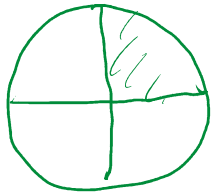
→ If they are of different color, replace them with a red ball

Q) Which ball will be left at the end



Q) You have a circular cake. You have to ... You can

Q) You have a circular cake. You can distribute it in 8 people. You can make 3 cuts.



80 km/hr  
bird



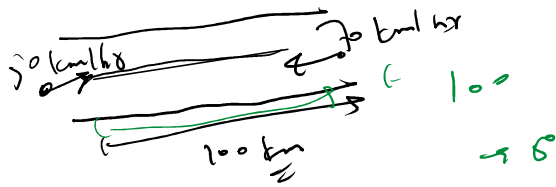
$$S = \frac{2}{T}$$

$$80 \times \frac{5}{6} = 66.67 \text{ km}$$

$$80 = \frac{D}{T}$$

=

Q)



80

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\frac{100}{50}$$

$$\frac{100}{120}$$



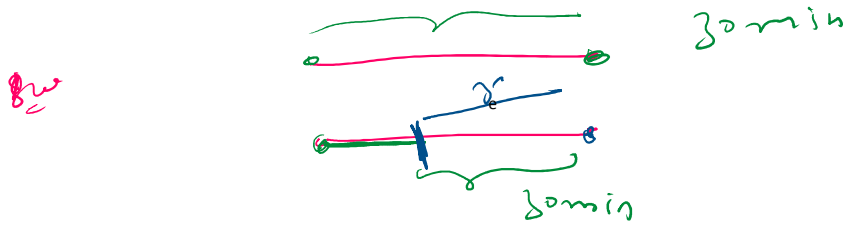
40 km/hr



Q) Two wires. Each of the wire burns in 1 hour. ... 45 mins

9) Two wires, can't

You have to measure 45 mins  
using these two wires.



10) You have 10 balls, and 5 lines  
Each line should have 4 balls.

