

# Busy at Maths 5 - Fifth Class

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## More chance

Events are **equally likely** if they have the same chance of happening.  
We can use equally likely outcomes to work out probabilities.

100 tickets are sold for a raffle. With one ticket, your chance of winning is  $1:100$  or  $\frac{1}{100}$ .  
With five tickets, your chance of winning goes up to  $5:100$  or  $\frac{5}{100}$  or  $\frac{1}{20}$  or 5%.

1. (a) What is your chance of winning with 10 tickets?  $\frac{\quad}{\quad}$  or  $\frac{\quad}{\quad}\%$   
 (b) What is the possibility of you winning if you hold 20 tickets?  $\frac{\quad}{\quad}$  or  $\frac{\quad}{\quad}\%$   
 (c) What is the chance of you being a winner if you bought 15 tickets?  $\frac{\quad}{\quad}$  or  $\frac{\quad}{\quad}\%$

### 2. Take a pack of playing cards and shuffle them.

- (a) Cut the pack and record the colour on each cut using a tally. Reshuffle the cards each time.  
Discuss the results with a partner after 20 cuts.

Frequency table	
Red	
Black	

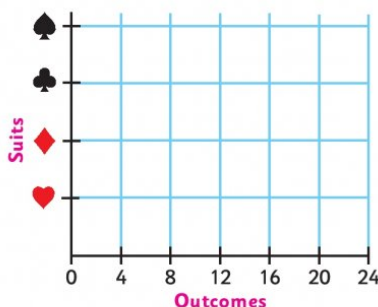


- (b) How many reds would you predict after (i) 30 cuts; (ii) 50 cuts; (iii) 80 cuts?

### 3. (a) Perform the same experiment over 40 cuts, but this time record the suits picked.

Suit	Tally	Outcomes
♥		
♦		
♣		
♠		

- (b) Show your results on a horizontal bar-line graph.



Discuss the results with a partner. Compare your results.

- (c) Now predict the number of diamonds out of 100 cuts.  $\frac{\quad}{\quad}$
- (d) How many picture cards would you expect from 100 cuts?  $\frac{\quad}{\quad}$
- (e) How many aces would you predict from 100 cuts?  $\frac{\quad}{\quad}$
- (f) How many fives would you predict from 100 cuts?  $\frac{\quad}{\quad}$



### Maths Fact

The odds (chances) are that 1 in 10 people are allergic to dust mites. At these odds, how many people in a village of 340 people could be allergic to dust mites?  $\frac{\quad}{\quad}$

