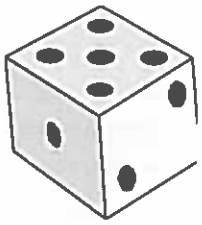
Using probability

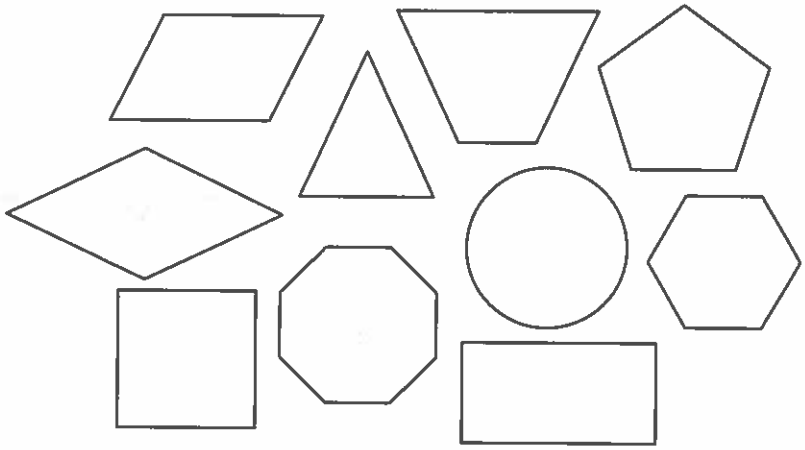
1. A die is rolled. Find the probability that it lands showing



(a) 1 $\frac{1}{6}$ **(b)** an odd number $\frac{1}{2}$

(c) a prime number (1, 2, 3, 5) $\frac{4}{6} = \frac{2}{3}$ **(d)** a multiple of 3 $\frac{2}{6} = \frac{1}{3}$ **(e)** a number less than 3 $\frac{2}{6} = \frac{1}{3}$ [5]

2. If one of these geometric shapes is picked at random, what is the probability that it has



(a) 4 sides $\frac{4}{10} = \frac{2}{5}$ **(b)** a centre of symmetry $\frac{8}{10} = \frac{4}{5}$ **(c)** less than 3 sides 0 [3]

3. Darren and his friend are playing with a pack of cards from which his maths teacher has confiscated the Ace of Spades and the King of Hearts.

What is the probability that the first card he deals is

(a) an Ace $\frac{3}{50}$ **(b)** a black card $\frac{25}{50} = \frac{1}{2}$ **(c)** a Queen $\frac{4}{50} = \frac{2}{25}$ **(d)** the 4 of clubs? $\frac{1}{50}$ [4]

4. A coin is tossed and a die thrown.

Copy and complete this table to show all the possible results: [2]

	1	2	3	4	5	6
Heads(H)	1H	2H	3H	4H	5H	6H
Tails(T)	1T	2T	3T	4T	5T	6T

What is the probability of getting: **(a)** Heads and an even number? $\frac{3}{12} = \frac{1}{4}$

(b) Tails and a prime number? $\frac{4}{12} = \frac{1}{3}$ [2]

[16 marks]