

## Probability Revision Exercise

- 1) A day in December is chosen at random for a youth club outing.

Find the probability that a **Saturday** is chosen.

December						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- 2) 2000 tickets are sold for a raffle in which the star prize is a television.

Kirsty buys 10 tickets for the raffle.

What is the probability that she wins the star prize?

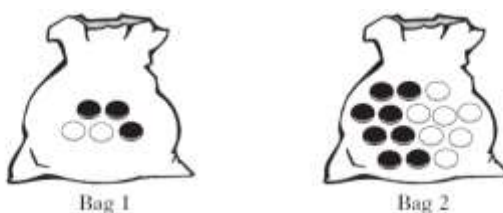
- 3) A college class consists of 8 male and 12 female students.

A student is chosen at random from the class.

What is the probability that the student is male?

Give your answer as a fraction in its simplest form.

- 4) Black and white counters are placed in two bags as shown below.



One counter is selected at random from each bag.

Which bag gives a greater probability of selecting a black counter?

- 5) A bag contains 8 blue marbles, 5 red marbles and 2 yellow marbles.

- a) A marble is taken from the bag.

What is the probability that the marble is yellow?

- b) This marble is put back in the bag.

One red marble and one blue marble are then removed.

What is the probability that the next marble taken from the bag is blue?

6) A box contains 3 red pencils and 12 green pencils.

a) A pencil is taken from the box.

What is the probability that the pencil is red?

Give your answer as a fraction in its simplest form.

b) The pencil is put back in the box.

More red pencils are then added to the box.

The probability of taking a red pencil is now  $\frac{1}{3}$ .

How many red pencils are now in the box?

## ANSWERS

1)  $\frac{4}{31}$

2)  $\frac{10}{2000} = \frac{1}{200}$

3)  $\frac{8}{20} = \frac{2}{5}$

4) Bag 1  $\frac{3}{5} = 0.6$                       Bag 2  $\frac{8}{15} = 0.5333$

Bag 2 has a greater probability of selecting a black counter.

5) a)  $\frac{2}{15}$

b)  $\frac{7}{13}$

6) a)  $\frac{3}{15} = \frac{1}{5}$

b) 3 more red pencils have been added to give 6 red pencils & 12 green pencils  $\frac{6}{18} = \frac{1}{3}$