Name_____   Date_____

PROBABILITY EX. 1

What is probability?
Probability is the chance that something will happen.
It is the likelihood or chance of an event occurring out of all the possible outcomes that
***can* happen.**

Probability may be expressed
i) in words
ii) as a fraction
iii) as a decimal
iv) or as a percent.

Let us try this question:

1) A sewing kit contains 20 buttons. 7 are red, 6 are orange, 3 are yellow, 3 are green and 1 is blue. What is the probability that a button chosen at random (a) will be red?

Now to help us understand how to do this exercise, part (a) is done as an example.

 (i) Let us express the probability in words. We know that there are 7 red buttons and that the total number of buttons is 20. Therefore our answer in words will be a 7 in 20 chance or a 7 out of 20 chance

(ii) Let us express the probability as a fraction. We know that there are 7 red buttons (so 7 will be our top number / numerator) and the total number of buttons is 20 (so 20 will be our bottom number / denominator). Therefore our answer as a fraction will be 7/20

(iii) Let us express the probability as a decimal. To do this we can divide the numerator (7) by the denominator (20).
7÷20 =0.35
Or we can make an equivalent fraction with a denominator of 10, 100 or 1000 and then change it to a decimal.
7/20 =35/100 (we multiplied the top and bottom by 5). 35/100 =0.35
Therefore our answer as a decimal will be 0.35

(iv) Finally, let us express the probability as a percent. From our answer above we know that 7/20 = 35/100. Now, since percent means " out of a 100" , our answer will be 35%

Now try the rest of the exercise on your own!!

Remember to express each answer in 4 ways: (i) in words; (ii) as a fraction in lowest terms; (iii) as a decimal (iv) as a percent.

1) A sewing kit contains 20 buttons. 7 are red, 6 are orange, 3 are yellow, 3 are green and 1 is blue. What is the probability that a button chosen at random

(a) will be red;   (i) _____   (ii) _____   (iii) _____   (iv) _____

b) will be orange;   (i) _____   (ii) _____   (iii) _____   (iv) _____

c) will be yellow;   (i) _____   (ii) _____   (iii) _____   (iv) _____

d) will be blue;   (i) _____   (ii) _____   (iii) _____   (iv) _____

e) will not be green? (i) _____   (ii) _____   (iii) _____   (iv) _____