NAME_____   DATE_____

EQUAL, EQUIVALENT and EMPTY SETS

Activity 4

> **Equal sets** have the **same elements.** E.g. {2, 3, 5, 6} and {6,3,2,5}
>
> **Equivalent sets** have the **same number of elements.** E.g. {1, 2, 3, 4,5} and {a, b, c, d, e}
>
> **Empty or null sets** have **zero elements.** E.g. {days of the week beginning with 'p'}

A. State which of the sets are empty, equal, or equivalent.

1. {m, o, m} and {4, 5, 6} _____

2. {8, 6, 7, 13} and {6, 7, 8,11} _____

3. {vowels} and {a, e, i, o, u} _____

4. { multiples of 12 between 13 and 23} = _____

5. {children who have travelled to the moon} = _____

> The **CARDINALITY of a set** is the number of elements belonging to the set.
>
> e. g. V = {vowels} and V = {a, e, i, o, u} Therefore, no. of elements in V, **n(V) = 5**
>
> e. g. P = {parrot, penguin, pigeon} Therefore, no. of elements in P, **n(P) = 3**

B. State the cardinality for the following sets.
(Click the down arrow in the space to access the choices.)

1. F = {players on a football team} , n(F) = _____

2. M = {Mazda, Toyota, Mercedes, Kia, Volvo}, n(M) = _____

3. N = {1, 2, 3, 4, 6, 8, 12, 24}, n(N) = _____

4. F = {portugal, cherry, mango}, n(F) = _____

5. J = { 1,4,9,16,25,36,49,64,81}, n(J) = _____