Study the following set: $R=\{$ apple, banana, cherry, date, egg\}. Use the following table to list all the subsets of $R$.

|  | List of subsets | Number of <br> subsets |
| :--- | :--- | :--- |
| zero elements | $\}$ |  |
| one element |  |  |
| two elements |  |  |
| three elements | Total number of subsets: |  |
| four elements |  |  |
| five elements |  |  |

Study the following set: $\mathbf{A}=\{\mathbf{1 , 2 , 3 , 4 , 5 , 6 \}}$
Place an $X$ in the appropriate box to identify the correct statements.
(a) $\{2,3\} \subset A$

(b) $\{1,2,3$ $3,4,5$

6
$7\}$
A $\square$
(c) $8 \subset A$

(d) $\{3,5,1,7\} \subset A$

(e) $\{1\} \not \subset A$

(f) $\{1,2,3,4\} \subset A$

(g) $\} \subset A$

(h) $9 \not \subset A$


## HOMEWORK

Study the following set: K= \{chicken, crab, beef, shrimp, prawns, mutton\}. Use the following table to list all the subsets of K.

|  | List of subsets | Number of <br> subsets |
| :--- | :--- | :--- |
| zero elements | $\}$ |  |
| one element |  |  |
| two elements |  |  |
| three elements |  |  |
| four elements |  |  |
| five elements | Total number of subsets: |  |
| six elements |  |  |

Using the formula $\mathbf{2 n}^{n}$, calculate the total number of subsets that can be formed from a set with:
(a) 4 elements
(b) 7 elements
(c) 3 elements
(d) 5 elements
(e) 6 elements

Use the symbol $\subset$ to list all the subsets of the following set: $K=\{5,7,9,11\}$. The first one is done for you.

1. $\{5\} \subset K$
