

**Answer on Question #46909 - Math – Set Theory**

Let  $U = \{a,b,c,d,e,f,g\}$ ,  $X=\{a,c,e,g\}$ ,  $Y=\{a,b,c\}$ , and  $Z=\{b,c,d,e,f\}$

1.2.1 Find  $Y \cap Z$

1.2.2 Find  $Y \cup Z$

1.2.3 Find  $X - Y$

1.2.4 Find  $X \times Y$

**Solution.**

1.2.1  $Y \cap Z = \{b, c\}$ .

1.2.2  $Y \cup Z = \{a, b, c, d, e, f\}$ .

1.2.3  $X - Y = \{e, g\}$ .

1.2.4  $X \times Y = \{(a, a), (a, b), (a, c), (c, a), (c, b), (c, c), (e, a), (e, b), (e, c), (g, a), (g, b), (g, c)\}$ .