

## Answer on Question # 76192 – Math –Discrete Mathematics

### Question

Find domain and range of (answers should be subsets of  $\mathbb{R}$ ):

$$f(x) = 1/(5x-6)$$

### Solution

Given,  $f(x) = 1/(5x-6)$ .

The domain does not contain the values for  $x$  that make the given expression undefined:

$$5x-6=0$$

or,

$$x=6/5$$

The domain in this problem is all values of  $x$  that make the expression defined.

Hence domain:

$$(-\infty, 6/5) \cup (6/5, \infty) = \{x \mid x \neq 6/5\}.$$

The range is the set of all valid  $y$  values:

$$(-\infty, 0) \cup (0, \infty) = \{y \mid y \neq 0\}$$

**Answer:** the domain is  $(-\infty, 6/5) \cup (6/5, \infty)$ , the range is  $(-\infty, 0) \cup (0, \infty)$ .