

MATH 110 - QUIZ 1 - 31 AUGUST 2006

Answer all of the following questions in the space provided.

1. (2 pts. each) Let  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ ,  $S = \{2, 4, 6\}$  and  $T = \{2, 3, 5, 7\}$ . List the elements of the following sets.

(a)  $S'$

$$S' = \{1, 3, 5, 7, 8, 9, 10\}$$

(b)  $S \cup T$

$$S \cup T = \{2, 3, 4, 5, 6, 7\}$$

(c)  $S' \cap T$

$$S' \cap T = \{3, 5, 7\}$$

2. (4 pts.) List all subsets of the set  $\{a, b, 3\}$ . (Hint: There should be a total of eight.)

$$\emptyset, \{a\}, \{b\}, \{3\}, \{a, b\}, \{a, 3\}, \{b, 3\}, \{a, b, 3\}$$