

**For full credit you must show your work. Partial credit may be given for incorrect solutions if sufficient work is shown.**

Suppose we are dividing three shares  $s_1, s_2, s_3$  among three players  $A, B, C$ . The value system for each player is given in terms of dollars in the table below.

	$s_1$	$s_2$	$s_3$
$A$	\$7.60	\$5.60	\$6.80
$B$	\$5.00	\$5.00	\$5.00
$C$	\$3.40	\$4.00	\$2.60

1. Determine the fair shares for each player. Then come up with all possible fair divisions. *Hint:* there are three possible fair divisions. (5pt)
2. Which fair divisions are efficient? (2.5pt)
3. Are any fair divisions envy-free? (2.5pt)