ECON 204 Sec. 01

Quiz 1

Dr. Kevin Hasker

1. *(4 Points)* **Honor Code:** Please read and sign the following statement:

   I promise that my answers to this test are based on my own work without reference to any notes, books, or the assistance of any other person during the test. As well, I will not assist others nor use a calculator or other electronic aid for calculation.

   Name and Surname: _

   Student ID: _

   Signature:

   _

2. *(6 points)* Define *risk aversion.*

   Definition 1 *A person is* risk averse *if they prefer the expected outcome of a lottery to the lottery.*

3. *(10 points)* In the following economy, list which options are Pareto Efficient and which are not. For each one explain your answer. Please feel free to use the back of the quiz to answer.

1	2	3
p^{PE}	s^{PE}	s^{PE}
$q^{PD(p)}$	r^{PE}	p^{PE}
r^{PE}	$t^{PD(s)}$	$t^{PD(s)}$
s^{PE}	p^{PE}	$q^{PD(p)}$
$t^{PD(s)}$	$q^{PD(p)}$	r^{PE}

Solution 2 $\{p, r, s\}$ *are Pareto efficient (1st, 3rd, and 4th option of P1)*

$\{p, s\}$ *are Pareto efficient because one person thinks they are best, thus they can not be Pareto dominated.* r *is Pareto efficient because the only thing person 2 thinks is better is* s*, but person 1 thinks* r *is better than* s.

q *(2nd best option for P1) is Pareto dominated by* p*, every single person thinks* p *is better than* q.

t *(worst option for P1) is Pareto dominated by* s.

They might also answer this using the $B_i(x)$ *correspondence, this set is the things* i *thinks are strictly better than* x.

$B_1(p) = \emptyset$	$B_2(p) = \{r, s, t\}$	$B_3(p) = \{s\}$	$B_1(p) \cap B_2(p) \cap B_3(p) = \emptyset$
$B_1(q) = p$	$B_2(q) = \{p, r, s, t\}$	$B_3(q) = \{p, s, t\}$	$B_1(q) \cap B_2(q) \cap B_3(q) = p$
$B_1(r) = \{p, q\}$	$B_2(r) = s$	$B_3(r) = \{p, q, s, t\}$	$B_1(r) \cap B_2(r) \cap B_3(r) = \emptyset$
$B_1(s) = \{p, q, r\}$	$B_2(s) = \emptyset$	$B_3(s) = \emptyset$	$B_1(s) \cap B_2(s) \cap B_3(s) = \emptyset$
$B_1(t) = \{p, q, r, s\}$	$B_2(t) = \{r, s\}$	$B_3(t) = \{p, s\}$	$B_1(t) \cap B_2(t) \cap B_3(t) = s$