Principles of Microeconomics – Econ1014
Week 4 Homework Assignment (non-mandatory)

Demand and Supply

Please complete this and turn it in to the TA at the classroom door at the start of class on Wednesday, September 24th if you wish it to be graded for extra credit. It will be available to be picked up at the econhelpdesk and you can review it with a TA by Tuesday of the following week. Your name and pawprint should be written legibly at the top of each page and all submitted pages should be stapled together.

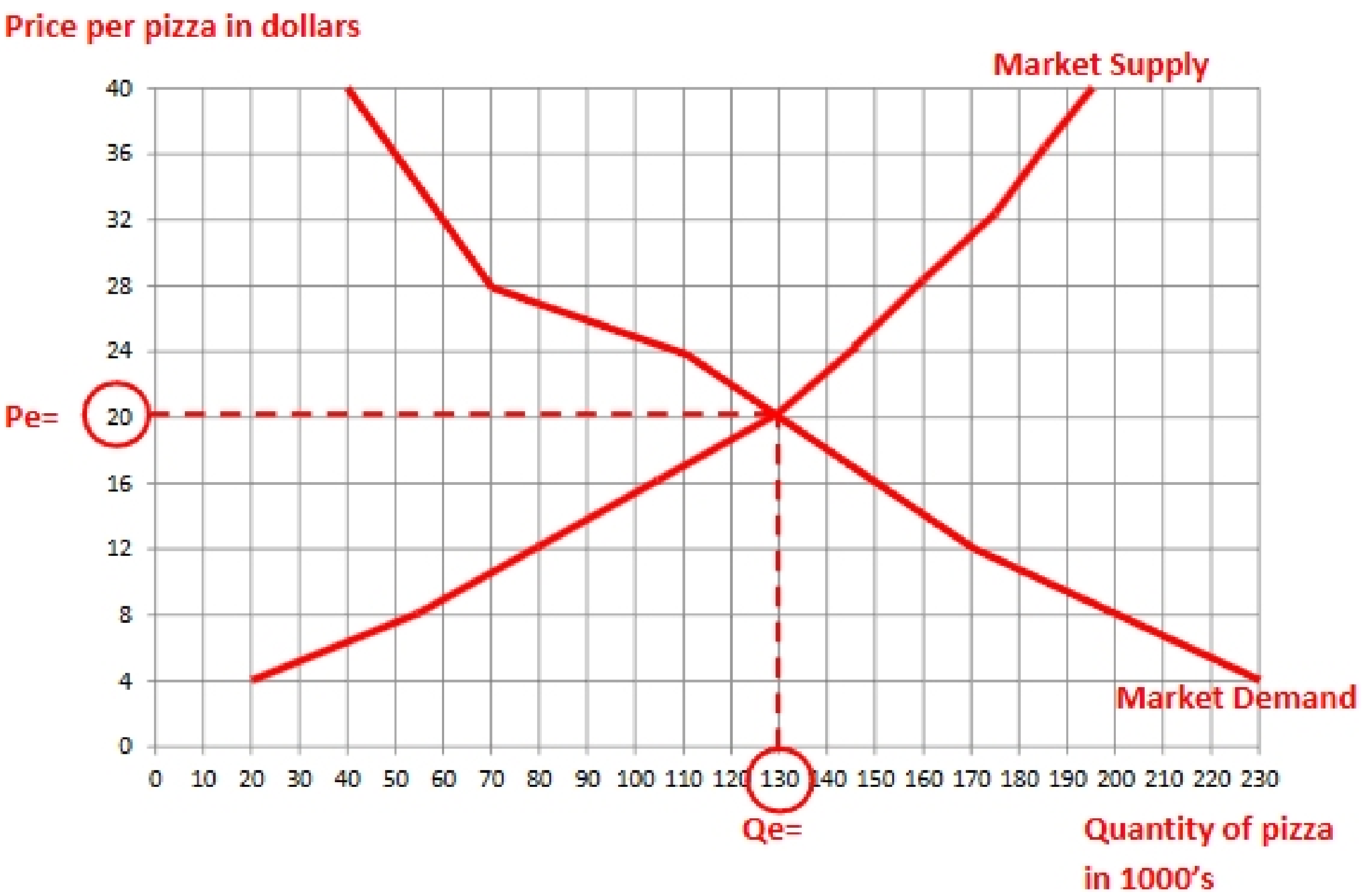
1. Modeling the Market for Pizza

Suppose you are an economic analyst for the restaurant industry and you are given the task of modeling the market for pizza in the City of Columbia. You perform a survey of potential pizza consumers and of potential pizza producers and then put this information together to determine not only the local demand and supply, but also to predict the market equilibrium and to predict how the market would react to price increases and decreases.

a. Suppose the following information comes from a survey of 10 potential pizza consumers. You believe each person surveyed represents a particular type of consumer so that the demand information for each of the 10 people surveyed represents 10,000 potential pizza consumers in town. Use this information to derive the local market demand for pizza. Fill in the figures in the last column of this table and plot the market demand curve on the following graph; be sure to label all axis and curves. (Note: the market demand curve will not be a constant slope straight line. Plot the points for each price and connect each plotted point with a straight line.)

Survey Question: How many pizzas would you buy in a week if the price were…?	Surveyed person 1	Surveyed person 2	Surveyed person 3	Surveyed person 4	Surveyed person 5	Surveyed person 6
$4	3	3	1	2	2	2
$8	2	3	0	2	2	2
$12	2	2	0	2	2	2
$16	1	2	0	1	2	2
$20	1	2	0	1	2	2
$24	1	2	0	1	1	1
$28	0	1	0	1	1	1
$32	0	1	0	1	1	1
$36	0	1	0	1	1	1
$40	0	1	0	1	0	1

Survey Question: How many pizzas would you buy in a week if the price were…?	Surveyed person 7	Surveyed person 8	Surveyed person 9	Surveyed person 10	Market Demand (for all 100,000 consumers)
$4	2	4	1	3	230,000
$8	2	3	1	3	200,000
$12	1	3	1	2	170,000
$16	1	3	1	2	150,000
$20	0	2	1	2	130,000
$24	0	2	1	2	110,000
$28	0	1	1	1	70,000
$32	0	1	0	1	60,000
$36	0	0	0	1	50,000
$40	0	0	0	1	40,000



b. Suppose the following information comes from your survey of the only 6 potential pizza suppliers in town. Use this information to find the local market supply of pizza. Fill in the figures in the last column of this table and plot the market supply curve on the graph above with your market demand curve; be sure to label all axis and curves.

Survey Question: How many pizzas would you sell in a week if the price were…?	Seller 1	Seller 2	Seller 3	Seller 4	Seller 5	Seller 6	Market Supply (for all 6 sellers in town)
$4	2,000	4,000	1,000	3,000	3,000	7,000	20,000
$8	7,000	10,000	8,000	14,000	4,000	11,000	54,000
$12	15,000	15,000	10,000	21,000	5,000	14,000	80,000
$16	18,000	25,000	12,000	27,000	6,000	17,000	105,000
$20	20,000	30,000	18,000	34,000	7,000	21,000	130,000
$24	22,000	35,000	24,000	35,000	8,000	22,000	146,000
$28	23,000	38,000	29,000	37,000	9,000	24,000	160,000
$32	25,000	43,000	33,000	39,000	10,000	25,000	175,000
$36	26,000	45,000	35,000	40,000	11,000	26,000	183,000
$40	28,000	47,000	36,000	43,000	12,000	27,000	193,000

c. What would be your prediction of the market equilibrium price of pizza and the equilibrium quantity of pizza bought and sold. Show this on your graph by labeling them Pe (for equilibrium price) and Qe (for equilibrium quantity bought and sold).

Pe=$20

Qe=130,000

d. What would be your prediction for this market if sellers try to charge a price of $12 per pizza? How many pizzas will local consumers want to buy (Qd), how many pizzas will local sellers want to sell (Qs) and will the market still be in equilibrium? If not, what will be the outcome and how will the market try to get back to equilibrium?

Qd=170,000 pizzas
Qs=80,000 pizzas
XS demand=90,000 pizzas
Pizza price will be bid up, this will reduce Qd and increase Qs so that the XS demand shrinks. This process will continue until price rises to the equilibrium price of $20 and there is no longer any XS demand.