Question #63058 - Economics - Microeconomics

Greg's Hardware has determined the following demand and supply equations for nails
QD = 10,000-25P
QS = -5,000 + 50P
a. How many nails would be sold for $100?

Solution:

Qd=10000-25*100=7500

Qs=-5000+50*100=0

Answer:0
b. At what price would nail sales be zero?

Solution:

0=10000-25*P

P=400

0=-5000+50*P

P=100

Answer: 400; 100.
c. When P = $200, what is total revenue? What is marginal revenue?

Solution:

Qd=10000-25*200=5000

Qs=-5000+50*200=5000

TR=P*Q=5000*200=1000000

25P=10000-Q

P=400-0.04Q

TR=(400-0.04Q)*Q

MR=400-0.08Q=400-0.08*5000=0
d. What is the relationship between quantity supplied and quantity demanded at a price of $300?

Solution:

Qd=10000-25*300=2500

Qs=-5000+50*300=10000

Qd<Qs

Answer: 7500 surplus