Problem #1

Find the equilibrium point for the demand and supply functions

*S*(*p*) = 60 + 7*p*

and

*D*(*p*) = 120 − 13*p*. [8.8]

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Problem #2

Graphing is helpful when solving systems because it allows us to “see” the solution. It can also be used on systems of nonlinear equations, and in many applications, it provides a satisfactory answer. However, graphing often lacks precision, especially when fraction or decimal solutions are involved. In [Section 8.2](http://digitalbookshelf.southuniversity.edu/books/0558542751/content/id/ch08lev1sec2), we will develop two algebraic methods of solving systems. Both methods produce exact answers.

*x* = 4,

*y* = 3

Problem #3

Office supplies. Staples® recently charged $17.99 per box of Pilot Precise® rollerball pens and $7.49 per box for Bic® Matic Grip mechanical pencils. If Kelling Community College purchased 120 such boxes for a total of $1234.80, how many boxes of each type did they purchase?

2*x* − 3*y* = 6,

3*y* − 2*x* = −6

*x* = 4,

*y* = 3

*x* +*y* = 6,

*x* − *y* = 4