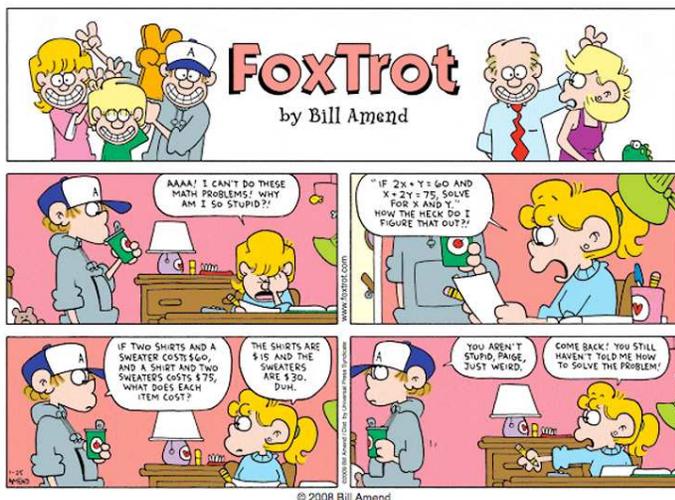## Lecture 4: Worksheet

If two shirts and a sweater costs 60 dollars and a shirt and two sweaters costs 75 dollars what does each item cost?

$$
\begin{aligned}
2x + y &= 60 \\
x + 2y &= 75
\end{aligned}
$$

Movie: Mean Girls

Twice the larger of two numbers is three more than five times the smaller and the sum of four times the larger and three times the smaller is 71. What are the numbers?

$$
\begin{aligned}
2x - 3 &= 5y \\
5x + 3y &= 71
\end{aligned}
$$

Movie: Perfect Score

2. A ten quart mixture consists by volume of one part juice to nine parts water. If x quarts of juice and y quarts of water are added to this mixture to make a twenty seven quart mixture that consists by volume of one part juice to two parts water, what is the value of x?

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$$
\begin{aligned}
10 + x + y &= 27 \\
3(1 + x) &= 10 + x + y
\end{aligned}
$$