

Problem 1

A Banana Peeling Contest

Ivonne and Daryl are professional banana peelers. Ivonne peels an average of 5.5 bananas per minute; Daryl peels an average of 3.4 bananas per minute.

Ivonne decided that she would get a head start (she cheats), so she peeled 15 bananas at home and carried them to *IVONNE AND DARYL'S BANANA-PEELING OFFICE*. When she walked into the office she found that Daryl had gotten there early (he cheats, too) and that he had peeled 93 bananas. She began immediately to catch up.

In this situation, let x stand for the number of minutes that have gone by since Ivonne began to peel bananas *at the office*.

Say *precisely* what each expression represents in this situation. (For example, "Daryl's banana's" is not precise enough!)

$5.5x$ represents

$3.4x$ represents

$5.5x + 15$ represents

$3.4x + 93$ represents

Problem 2

Two planes leave Phoenix, traveling to Chicago, Illinois. Here is information about them:

<i>Flight</i>	<i>Departure Time</i>	<i>Air Speed</i>
Southwest 83	5:15am	430 mi/hr
American 27	6:45am	550 mi/hr

- a) Write an expression that represents the number of miles the American flight has flown since it departed Phoenix. Say what your variables stand for.
- b) Write an expression that represents the number of miles the Southwest flight has flown since the American flight departed. Say what your variables stand for.
- c) Write an expression that represents the number of miles between the two flights since the American flight departed. Say what your variables stand for.

Problem 4

Scenario: Ms. Pitney and Ms. Delgado leave the same office and head for their respective homes. They live in opposite directions from the office. Ms Pitney left for home at 5pm and traveled 40 mi/hr. Ms Delgado left for home at 6:30pm and traveled at 45 mi/hr.

Questions:

- 1) What does x represent in this situation?

- 2) What does $(x + 1.5)$ represent in this situation?

- 3) What does $45x$ represent in this situation?

- 4) What does $40(x + 1.5)$ represent in this situation?

- 5) What does $45x + 40(x + 1.5)$ represent?

- 6) What does the equation $45x + 40(x + 1.5) = 30$ represent?