

## 15. Box Lunch

### Solution

*Use All Given And Implied Information.* Since the lunch box with the monster burger costs \$7.00 and the lunch box with the plain burger costs \$5.00, how much more does the monster burger cost than the plain burger? Then, how much must the plain burger cost? Then, how much does the lunch box cost?

The monster burger must cost  $\$7.00 - \$5.00 = \$2.00$  more than the plain burger. Since the monster burger costs three times as much as the plain burger, the plain burger must cost \$1.00. Then the lunch box by itself must cost  $\$5.00 - \$1.00 = \$4.00$ .

*Use Trial and Error and Work Backwards.* Guess how much the lunch box costs. Then figure how much the plain burger must cost and how much the monster burger must cost according to your guess. Check whether your guess is correct using the conditions of the problem. *Make a Chart* to keep track of your guesses. For example,

Guess cost of lunchbox	Then find cost of plain burger	Then find cost of monster burger	To check ask yourself, "Is three times the cost of the plain burger equal to the monster burger?"
\$1.00	\$5.00 <u>-1.00</u> \$4.00	\$7.00 <u>-1.00</u> \$6.00	\$ 4.00 x 3 \$12.00 No, \$12.00 does not equal the cost of monster burger.
Guess again \$4.00	\$5.00 <u>-4.00</u> \$1.00	\$7.00 <u>\$7.00</u> \$3.00	\$ 4.00 x 3 \$ 3.00 It checks!

We could guess that the lunch box costs \$1.00. Then the plain burger would cost  $\$5.00 - \$1.00 = \$4.00$ . The monster burger would cost  $\$7.00 - \$1.00 = \$6.00$ .

To check our guess we see if the monster burger costs three times as much as the plain burger:  $3 \times \$4.00 = \$12.00$ , not \$6.00 so that guess is incorrect.

Guessing again we try \$4.00 for the cost of the lunch box. Then we find the cost of a plain burger must be \$1.00, the cost of the monster burger must be \$3.00, and three times \$1.00 does equal \$3.00. It checks and the cost of the lunch box is \$4.00.