PROBLEM SOLVING WORKSHOP
LESSON 7.2

Using ALTERNATIVE METHODS

TEKS a.6, A.1.D, A.1.E

Another Way to Solve Example 3, page 437

MULTIPLE REPRESENTATIONS In Example 3 on page 437, you saw how to solve the problem about website hosting by solving a linear system algebraically. You can also solve the problem using a table.

PROBLEM

WEBSITES Many businesses pay website hosting companies to store and maintain the computer files that make up their websites. Internet service providers also offer website hosting. The costs for website hosting offered by a website hosting company and an Internet service provider are shown in the table. Find the number of months after which the total cost for website hosting will be the same for both companies.

Company	Set-up fee	Cost per month
Internet service provider	$10	$21.95
Website hosting company	None	$22.45

METHOD

Making a Table An alternative approach is to make a table.

STEP 1 **Make** a table for the total cost of website hosting for both companies.

Include the set-up fee in the cost for the first month.

STEP 2 **Look** for the month in which the total cost of the service from the Internet service provider and the website hosting company is the same. This happens after 20 months.

Months	Internet service provider	Website hosting company
1	$31.95	$22.45
2	$53.90	$44.90
3	$75.85	$67.35
⋮	⋮	⋮
19	$427.05	$426.55
20	$449.00	$449.00
21	$470.95	$471.45

PRACTICE

1. **TAXIS** A taxi company charges $2.80 for the first mile and $1.60 for each additional mile. Another taxi company charges $3.20 for the first mile and $1.50 for each additional mile. After how many miles will each taxi cost the same? Use a table to solve the problem.

2. **SCHOOL PLAY** An adult ticket to a school play costs $5 and a student ticket costs $3. A total of $460 was collected from the sale of 120 tickets. How many student tickets were purchased? Solve the problem using algebra. Then use a table to check your answer.