

# Function Confusion

## TECHNOLOGY

Many technological products and systems can be programmed to perform different functions, saving time and energy.

## Activity

Simon's parents have bought a second-hand cash register for their café. Simon and Terry are trying to work out what the function keys have been programmed to do.



1. They try each key with an input of \$3.00 and then an input of \$5.00:

Input	Key	Output
\$3.00	F1	\$6.00
\$5.00	F1	\$10.00
\$3.00	F2	\$2.70
\$5.00	F2	\$4.50
\$3.00	F3	\$2.00
\$5.00	F3	\$4.00
\$3.00	F4	\$2.40
\$5.00	F4	\$4.00

Hmm ... 30 cents is 10 percent of \$3.

What does each F key do?

2. Simon and Terry discover that the function keys can be used in combination. Find the outputs for these inputs and function keys:
- |  |   |
|--|---|
| <p>a. \$13.00    <input type="button" value="F1"/> <input type="button" value="F1"/></p> <p>c. \$25.00    <input type="button" value="F1"/> <input type="button" value="F2"/></p> <p>e. \$12.00    <input type="button" value="F2"/> <input type="button" value="F2"/></p> | <p>b. \$18.30    <input type="button" value="F3"/> <input type="button" value="F3"/></p> <p>d. \$21.00    <input type="button" value="F3"/> <input type="button" value="F4"/></p> <p>f. \$7.80    <input type="button" value="F2"/> <input type="button" value="F3"/> <input type="button" value="F1"/></p> |
|--|---|
3. Terry thinks that the order in which the function keys are pressed makes a difference. Simon doesn't agree. Using examples, settle their argument.
4. Simon wonders whether pressing the F2 key twice will give the same result as pressing the F4 key.
- Discuss why he might think this.
  - Using several different inputs, show whether he is correct.
5. Simon's father reprograms the F4 key so that it can be used to give a 15 percent discount to regular customers. Find the outputs for these transactions:
- \$30.00
  - \$24.00
  - \$8.00

## Focus

Finding and applying percentages