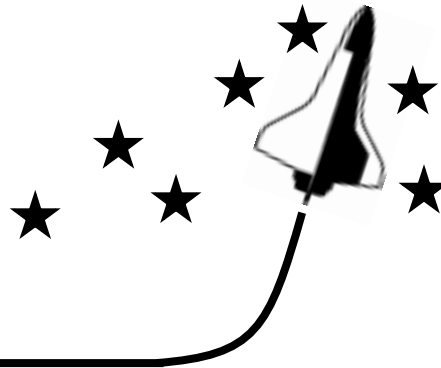


FACULTY NOTES

The LTAs and Spinoffs are designed so that each professor can implement them in a way that is consistent with his/her teaching style and course objectives. This may range from using the materials as out-of-class projects with minimal in-class guidance to doing most of the work in class. The LTAs and Spinoffs are amenable to small group cooperative work and typically benefit from the use of some learning technology. Since the objective of the LTAs and Spinoffs is to support the specific academic goals you have set for your students, the Faculty Notes are not intended to be prescriptive. The purpose of the Faculty Notes is to provide information that assists you to take full advantage of the LTAs and Spinoffs. This includes suggestions for instruction as well as answers for the exercises.



FACULTY NOTES

SPINOFF 12C

Rocket Spies: Codes and Rockets in the 1950's and 1960's

Solutions

- 1) The original cost of “PTTT \$45.99” is \$40.00. The profit for the item is therefore $\$45.99 - 40.00$ or \$5.99.
- 2) Original Cost + Profit = Sale Price. Therefore, $\$14.50 + \$3.15 = \$17.65$. The sale price is \$17.65 for a profit of \$3.15.
- 3) Use the code word S L O P B U C K E T and the rule that associates its letters with the digits 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 respectively to encode three items.

Answers will vary. Here are three possible answers.

| Item | Original Cost | Sale Price | Profit | Code |
|-------------------|---------------|------------|---------|----------------|
| Soccer shin guard | \$12.00 | \$17.98 | \$5.98 | SLTT \$17.98 |
| Mouse trap | \$0.75 | \$4.19 | \$3.44 | TTCB \$4.19 |
| Television | \$263.53 | \$329.99 | \$66.46 | LUOBO \$329.99 |

Answers and code words will vary. It is important to have no repeating letters so that each letter represents one and only one of the ten possible digits. In order to decode the encrypted price, each symbol must have a value and it must have no more than one value. A double letter in a word would violate this requirement and make decoding impossible.

- 4) UE = 29, XH = 01, TS = 45, IL = 78

So far: 1 2 3 4 5 6 7 8 9 0
H U _ T S _ I L E X

- 5) The word originally has a double L (LL). This is a big hint.
The ten-letter code word is “HUNTSVILEX.” This is “HUNTSVILLE” with the second L dropped and an X added at the end to provide the tenth letter.