# 'Fault Finding and Fixing' Percentages Tasks - Set \#1 

Malcolm Swan

Mathematics Education
University of Nottingham
Malcolm.Swan@nottingham.ac.uk
Jim Ridgway
School of Education
University of Durham
Jim.Ridgway@durham.ac.uk

Percentages are a common source of error as these genuine mistakes will show.

The aim of this assessment is to provide the opportunity for you to:

- explain clearly the source of each error.
- rectify errors and produce correct statements or answers


## 1. Shirts

The other day I was in a department store, when I saw a shirt that I liked in a sale. It was marked " $20 \%$ off". I decided to buy two. The person behind the till did some mental calculations. He said, " $20 \%$ off each shirt, that will be $40 \%$ off the total price." (Incident in local supermarket)

Explain clearly and fully what you would say to the shop assistant to convince him that an error has been made. Also explain how the error should be put right.


## 2. TV Sports program

Few programmes can boast a 100 percent increase in their viewing audience since first going on air, but Match of the Day which celebrates its 30th birthday this week proudly makes that claim. The first programme attracted just 50,000 viewers. Tonight it is estimated that the audience will be in excess of five million. (Radio times, August 1994)

Explain clearly how you know that an error has been made.

Show how the error should be put right.


## 3. So Near...

Andy Green drove his Thrust SSC car on the fastest officially timed run in land speed racing history, but missed breaking the sound barrier by a frustrating 0.003 per cent of the speed of sound. Timing officials gave the run a provisional Mach 0.997. (The Times, 14 October 1997)

Explain how you know an error has been made.


Show how you would put the error right.

## 4. A Saving

Free 33\% extra. 2 litres for the price of 1.34 litres. (Safeway advertisement in Bulawayo Chronicle, 3 December 1997)

Explain how you know an error has been made.


Show how you would put the error right.

## 5. Cows

If you can produce 20 per cent more milk per cow, you can decrease your herd by $20 \%$ to produce the same amount of milk. (Observer Magazine, 10 July 1988)


Explain how you know an error has been made.

Show how you would put the error right.

