

## Enrichment

28. If a dress is sold for \$270, it gives a profit of  $y\%$  on the cost price. If the dress is sold for \$210, it gives a loss of  $y\%$  on the cost price.
- Find the value of  $y$ .
  - Find the cost price of the dress.
  - If the dress is marked up by  $m\%$  of the cost price and it is then sold at  $m\%$  discount, express the percentage gain or loss on the cost price in terms of  $m$ .
29. On a certain day, the foreign currency exchange rates between the Singapore dollar (SGD), the US dollar (USD) and the Euro (EUR) were as follows: SGD 1 = USD 0.7346 and SGD 1 = EUR 0.4719.
- Suppose the price of a camera is USD 350 on the Internet. Express its price in
    - Singapore dollars,
    - Euro.
  - Ali had a dinner in Italy which costs EUR 45. If he paid USD 100, what should be the change in Euro?
  - Mr Tan wanted to import a machine from either Germany or the United States. The quotation for the price from Germany was EUR 2500. The quotation from the United States was USD 4000. Where should he buy the machine from?  
Give your answers correct to 2 decimal places.
30. A sum of money is invested at the interest rate of  $r\%$  p.a. compounded annually. The sum of money doubles itself in 8 years' time.
- Find the value of  $r$ .
  - In how many years, at least, will the amount be more than 3 times the initial sum?
31. Joyce buys a TV set which costs \$4000 by paying 3 monthly payments. The interest is calculated at the end of every month on the amount still owed at the rate of 2% per month.
- If she repays \$2000 at the end of the first month and \$ $x$  each at the end of the second month and the third month, find
    - the amount still owed at the beginning of the second month,
    - the value of  $x$ .
  - If she repays \$ $y$  each at the end of the first month and the second month, and \$2000 at the end of the third month, find the value of  $y$ .  
Give your answers correct to 2 decimal places.