

# Percentage Change

## Non-Calculator Questions

- 1 Increase 45 by 25%.
- 2 Increase 200 by 30%
- 3 Increase 80 by 75%
- 4 Increase 50 by 40%
- 5 Decrease 80 by 20%
- 6 Decrease 60 by 15%
- 7 Decrease 120 by 25%
- 8 Decrease 150 by 70%

## Calculator Questions

- 9 Increase 83 by 17%
- 10 Decrease 93 by 83%
- 11 Increase 392 by 42%
- 12 Decrease 392.7 by 93%
- 13 Increase 395 by 18.7%
- 14 Decrease 583 by 39.3%
- 15 Increase 9209 by 794%
- 16 Decrease 93.592 by 7.2%

## Increasing and Decreasing by a Percentage Amount

### Non-Calculator Questions

- 17 Increase 85 by 10% then reduce it by 10%
- 18 Increase 200 by 40% and then decrease it by 40%
- 19 Decrease 200 by 20% and then increase it by 30%
- 20 Increase 300 by 40% and then decrease it by 50%
- 21 Decrease 250 by 30% and then increase it by 30%
- 22 Increase 480 by 60% and then decrease it by 40%
- 23 Decrease 200 by 20% and then reduce it again by 50%
- 24 Increase 400 by 30% and then increase it again by 30%

### Calculator Questions

- 25 Increase 84 by 19% then reduce it by 14%
- 26 Increase 6507 by 46% and then decrease it by 46%
- 27 Decrease 242 by 22% and then increase it by 35%
- 28 Increase 394 by 48% and then decrease it by 57%
- 29 Decrease 938 by 33% and then increase it by 33%
- 30 Increase 9382 by 67% and then decrease it by 48%
- 31 Decrease 783 by 23% and then reduce it again by 59%
- 32 Increase 489 by 35% and then increase it again by 33%

### Simple Interest

- 33 Billy borrows £5000 from his bank. He is charged 7% interest per annum (each year). He pays the money back over 4 years. How much money does he have to pay back?
- 34 Monica has £20500 in her bank account. Her bank pays an interest rate of 2.5% p.a., provided she doesn't touch her money for three years. How much money is there in her account at the end of year 3?
- 35 Jean pays £200 per month for one year on a loan of £2100. What rate of interest has she paid?
- 36 Three years ago, Annette overpaid her Income Tax by £2090. Her Majesties' Revenue and Customs pays 8% interest which is calculated using simple interest. What value is the cheque that she should receive from HMRC?

### Compound Interest

- 1 On an island, one pair of rabbits reproduce young at a rate of two babies every six months. If none of the rabbits die, how many rabbits are there on the island after five years?
- 2 A bank charges 29.7% interest for a loan. Ibrahim borrows £17000 for a new car. He pays back the loan over a period of four years with 48 equal payments.
  - a. How much interest does he pay over the four years?
  - b. How much are each of the monthly repayments?
- 3 A credit card charges 39.9% interest. Billy borrows £2995 for 2 years. How much does Billy have to pay back?