

## Simple and Compound Interest

1. Find the simple interest earned on \$6000 at 12% pa for 5 years.

$$I = 6000 \times 12 \times 5$$

$$= \$360,000$$

Indicated some understanding of substitution into the simple interest formula

2. A new car, valued at \$28 000, depreciates at 9% pa. Find the value of the car 3 years after purchase.

$$I = 28000 \times 9 \times 3$$

$$= \$756,000$$

3. (a) Using the compound interest formula, find the amount that \$5000 will grow to when invested at a rate of 12% pa for 2 years, compounded quarterly.

$$A = 5000 \left(1 + \frac{12}{100}\right)^2$$

$$= \$6272$$

Indicated some understanding of substitution into the compound interest formula

- (b) Find the interest earned.

$$= \$6272$$

4. \$240 interest is earned on a principal of \$1500 at a simple interest rate of 4% pa. For how many years was the principal invested?

~~Principal = \$1500~~



5. Stephen bought a car for \$12 400 on the following terms:  
 15% deposit  
 18% pa simple interest  
 Repayments made monthly for 2 years

(a) How much was the deposit?

\$1860

(b) What was the balance owing after payment of the deposit?

~~\$12399.85~~  
~~\$1050~~ 10540

(c) How much interest was charged on the balance?

~~I = 12400 × 18 × 2~~  
~~= \$446400~~  
~~1204~~

(d) What was the total amount of Stephen's repayment of over the 2 years?

446400 - 10540  
 = \$435860

(e) What was the amount of each monthly repayment?

435860 ÷ 48  
 = \$9080.42

Correctly calculated the deposit, but provided no evidence of the process. Indicated some understanding of the process of purchasing an item on terms

### Grade Commentary

Sam has demonstrated an elementary understanding of consumer arithmetic concepts. The simple and compound interest formulae has been correctly chosen, but at times it has been incorrectly used when applying the relevant interest rates as percentages. Sam has attempted to apply appropriate strategies when purchasing an item on terms. This work sample demonstrated characteristics of work typically produced by a student performing at grade E2 level.