For Examiner's Use

2 **(a)** In a sale, Jen buys a laptop for \$351.55.
This price is 21% less than the price before the sale.

Calculate the price before the sale.

Let price before the sale be '\$x'

∴ New price = $351.55 = x - \frac{21}{100}(x)$

$\Rightarrow 351.55 \times 100 = 100x - 21x$

$\Rightarrow 79x = 35155$

$\Rightarrow x = 35155 \div 79$

$= 445$

Answer(a) \$ 445 [3]

(b) Alex invests \$4000 at a rate of 8% per year simple interest for 2 years.
Bob invests \$4000 at a rate of 7.5% per year compound interest for 2 years.

Who receives more interest and by how much?

Alex

$P = \$4000$

$R = 8\%$

$N = 2$

$S.I = \frac{PNR}{100}$

$= \frac{4000 \times 2 \times 8}{100}$

$= \$640$

Bob

$P = \$4000$

$R = 7.5\%$

$N = 2$

$A = P\left(1 + \frac{r}{100}\right)^n$

$= 4000\left(1 + \frac{7.5}{100}\right)^2$

$A = \$4622.5$

$C.I = A - P$

$= 4622.5$

$- 4000.0$

$\$622.5$

∴ (1) Alex recieves more interest

(2) His interest is more by $(640 - 622.5) = \$17.5$

Answer(b) Alex receives \$ 17.5 more interest. [6]