SQ FM 11 Mia wants to invest $42 000 for a total of 5 years. She has three investment options. **5**
Option A – simple interest is paid at the rate of 6% per annum
Option B – compound interest is paid at a rate of 5.5% per annum, compounded annually
Option C – compound interest is paid at a rate of 4.8% per annum, compounded quarterly
Determine Mia's best investment option. Support your answer with calculations.

Option A: Simple interest $= 42\,000 \times 0.06 \times 5$
$= 12\,600$
Future Value $= 42\,000 + 12\,600$
$= 54\,600$

Option B: Future Value $= 42\,000(1.055)^5$
$= 54\,892.32027\ldots$
$= 54\,892.32$ (2 dec pl)

Option C: Quarterly interest rate $= 4.8\% \div 4 = 1.2\%$, No. of quarters $= 5 \times 4 = 20$
Future Value $= 42\,000(1.012)^{20}$
$= 53\,316.24322\ldots$
$= 53\,316.24$ (2 dec pl)

The best investment strategy is Option B.
