

Financial Literacy Review

Answer key Final answers only. Try first, then check.

CORE SKILLS

- K1** a) Fixed: rent, car insurance, phone plan. Variable: groceries, hydro, gas, entertainment.
 b) Net income: \$2510; expenses: \$2110
 c) Surplus of \$400 a month; \$4800 a year
- K2** a) \$1389.15
 b) \$686.00
 c) 25% a year; \$379.69
- K3** a) \$300
 b) \$1894.50
 c) 3% per year
- K4** a) \$2431.01
 b) \$431.01
 c) \$4187.42
- K5** a) \$1326
 b) \$126
 c) Total \$1296, cost of credit \$96; Plan 2 costs less

REAL WORLD

- A1** a) Surplus \$172; she needs \$250 a month, so no: she is \$78 a month short.
 b) Surplus \$272; 6 months (\$1632 saved)
 c) No: the laptop costs \$1695 with HST and she has \$1632 after 6 months. She needs 7 months (\$1904 saved).
- A2** a) Cards: $C = 2000(1.09)^t$, \$3077.25; snowmobile: $S = 12000(0.8)^t$, \$3932.16
 b) After 6 years (cards \$3354.20, snowmobile \$3145.73)
 c) After 15 years (model: \$422.21). From then on it is worth about \$500 as parts, so the model no longer applies.
- A3** a) Plan A: \$16,668 repaid, \$1668 cost of credit. Plan B: \$18,432 repaid, \$3432 cost of credit.
 b) \$1764 more; the car is worth \$4560.10 after 6 years.
 c) The car is worth \$10,086. No: after selling it, Ethan still owes \$584 and has no car.

THINK IT THROUGH

- T1** a) Simple interest (interest on the \$3000 only); correct value \$4014.68
 b) \$227.25 (\$4014.68 – \$3787.43). Year 5's interest is paid on the \$3000 plus the interest from years 1 to 4.
 c) After 10 years (\$5372.54 compared with \$4800)
- T2** a) Net income \$2400; rent at most \$840; savings at least \$240
 b) e.g. rent \$840, phone \$60, transit \$130 (fixed); groceries \$450, hydro \$100, clothing \$150, entertainment \$170 (variable); savings \$500. Total \$2400.
 c) New rent \$882 > \$840, so no. Cutting other lines keeps the budget balanced but does not change the 35% rule. Jordan needs a net income of at least \$2520 (or cheaper rent).

BOSS LEVEL

- Boss** a) \$75
 b) $x = 30$
 c) With $r = \frac{x}{100}$, the price is multiplied by $(1 + r)(1 - r) = 1 - r^2$, and $1 - r^2 < 1$ because $r > 0$.

