**Coding: Practice with Interest**

**Financial Literacy**

**Unit 1 Line Master 4a**

1. a) Which of the code samples below accurately represents this scenario?

*Scenario:* CAN Bank offers a bank account option with simple interest
of 4.0% per year. If $3000 is put into this bank account, how much will the account be worth after 8 years?

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| **Code A**principal = 3000rate = 0.050time = 0for i in range (0,8):  time = time + 1  amount = (principal \* rate \* time) + principal  print (time, '\t\t', amount) |
| **Code B**principal = 2000rate = 0.040time = 0for i in range (0,5):  time = time + 1  amount = (principal \* rate \* time) + principal  print (time, '\t\t', amount) |
| **Code C**principal = 3000rate = 0.040time = 0for i in range (0,8):  time = time + 1  amount = (principal \* rate \* time) + principal  print (time, '\t\t', amount) |

b) Explain why the other two code samples do not represent the given scenario.

c) How much will the account be worth after 8 years?

 **Coding: Practice with Interest** (cont’d)

**Financial Literacy**

**Unit 1 Line Master 4b**

2. a) Which of the code samples below accurately represents this scenario?

*Scenario:* A bank offers a loan at an annual interest rate of 6.5%, compounded monthly for 10 years. If the loan amount is $100 000,
how much will be owed after each year for 10 years?

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| **Code A**principal = 150000rate = 0.065compoundFrequency = 12time = 0for i in range (0,5):  time = time + 1  amount = principal \* (1 + rate/compoundFrequency)\*\*(compoundFrequency\*time)  print (time, '\t\t', amount) |
| **Code B**principal = 100000rate = 0.065compoundFrequency = 12time = 0for i in range (0,10):  time = time + 1  amount = principal \* (1 + rate/compoundFrequency)\*\*(compoundFrequency\*time)  print (time, '\t\t', amount) |
| **Code C**principal = 100000rate = 0.075compoundFrequency = 365time = 0for i in range (0,10):  time = time + 1  amount = principal \* (1 + rate/compoundFrequency)\*\*(compoundFrequency\*time)  print (time, '\t\t', amount) |

 **Coding: Practice with Interest** (cont’d)

**Financial Literacy**

**Unit 1 Line Master 4c**

b) Explain why the other two code samples do not represent the given scenario.

c) How much will be owed after each year for 10 years?