GRADE 11 ESSENTIAL
UNIT B - INTEREST AND CREDIT

INTEREST WORKBOOK ANSWER KEY

These are the answers (not the full solutions) to the PRISM Purple Workbook 'Chapter 6' Simple and Compound Interest.

Apologies in advance if there are a couple errors in the given answers.

PRETEST

Successful completion on first try of this pre-test is a good clue you likely do not need to do much of the full workbook!

1. $22.40 2. $8.25 3. 1 Year 4. 4% 5. $600

6. 9%

7. $224.72 8. $115.76 9. $337.46 10. $420.38

LESSON 1 SIMPLE INTEREST

Calculating the Interest and Total Amount using A= P+I & I = Prt

Example 1: The interest will be $54
Example 2: The interest will be $19

1. $50 2. $96 3. $55 4. $224.25
5. $288 6. $56.25 7. $300 8. $375
9. $1011.50 10. $585.00

Lesson 1 Problem Solving

1. $81 2. $8.75 3. $38.50 4. $1,200 ; $11,200
5. $102 6. $23; $34.50

Lesson 2 Simple Interest

(solving for all variables in I=Prt) (ie: Algebra)
Example1: P = $200; Example 2: r = 8%; Example 3: t = 2.5 years

1. $100 2. 8% 3. ½ year 4. $234 5. 2 years
6. 8% 7. $3,500 8. 7.5% 9. 3 years 10. $11,250

Lesson 2 Problem Solving
Solve for different variables in I = Prt

1. $400 2. 12% 3. ½ year 4. $9.25; $749.25
5. $600 6. 15% 7. $3,400

LESSON 3 COMPOUND INTEREST
Calculating Interest Compounded Annually using iterations (recursion); ie: year by year
Do at least half the questions recursively (ie: year by year) in a table.

Example: $476.41

1. $561.80 2. $779.12 3. $926.10 4. $966.36
5. $259.01 6. $1166.40

There is an easier way to do this! Try using the easier Compound Interest formula instead of the year by year iterative (ie: step by step) method.

Lesson 3 Problem Solve

1. $674.16 2. $441; $463.05 3. $367.52; $363.00
4. 578.81
5. Landon: $357.30; Elisa: $241.59; difference: $115.70

LESSON 4 COMPOUND INTEREST

Now calculating the Total Amount of the loan or investment for shorter compounding periods

Twice per year = semi-annual interest payments
Four times per year = quarterly interest payments
12 times per year = Monthly; Daily = 365 times/yr; etc.

Lots more lines to calculate if doing it period by period in a recursive (iterative) manner in rows in a table. Two lines per year if semi-annual, four lines per year if quarterly, etc

Do at least half the questions recursively (ie: period by period) in a table.

Example: 106.09 + 3.18 = $109.27

1. $218.54 2. $331.14 3. $105.09
4. $421.37 5. $513.47 6. $613.60

Of course, for lots of periods and years you will want to use the proper Compound Interest Formula.

LESSON 4 Problem Solving

Solving for the Total Amount due or interest earned in a compounding loan or investment.

1. $646.54 2. $442.57
3. $106 ; $106.09; $106.14 (wow! Big deal!)
4. $1.62
5. Account A will have more money. It will have $0.42 more

Of course using the proper compound interest formula would be the smart way to do these. Or an App on your device.

PRACTICE TEST

Of course I will have some Simple and Compound Interest Questions on my own test!

1. $67.50 2. $119 3. 12% 4. 2.5 years
5. $3,840 6. 15%
7. $343.47 8. $694.58 9. $562.75 10. $409.07