

Grade 11 Exponential Growth & Finance Unit Test

Name _____ Date _____ Score _____ / 12

Part A · Exponential Growth & Decay

01 A quantity of 80 decays by 25% each year for 2 years. What is the quantity after 2 years?

Answer: _____

02 A quantity of 100 decays by 20% each year for 2 years. What is the quantity after 2 years?

Answer: _____

03 A quantity of 16 decays by 25% each year for 1 year. What is the quantity after 1 year?

Answer: _____

04 A quantity of 10 grows by 50% each year for 1 year. What is the quantity after 1 year?

Answer: _____

Part B · Simple Interest

Find the simple interest for each investment.

05 \$200 at 4% for 6 months = _____

06 \$200 at 4% for 4.5 years = _____

07 \$400 at 4% for 6 months = _____

08 \$1300 at 4% for 3 years = _____

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Part C • Compound Interest

Find the compound interest earned on each investment (compounded annually).

09 \$1100 at 4% for 2 years = _____

10 \$800 at 10% for 3 years = _____

11 \$1900 at 3% for 3 years = _____

12 \$1200 at 8% for 2 years = _____

Grade 11 Exponential Growth & Finance Unit Test (Answer Key)

Part A · Exponential Growth & Decay

01 A quantity of 80 decays by 25% each year for 2 years. What is the quantity after 2 years?

45

02 A quantity of 100 decays by 20% each year for 2 years. What is the quantity after 2 years?

64

03 A quantity of 16 decays by 25% each year for 1 year. What is the quantity after 1 year?

12

04 A quantity of 10 grows by 50% each year for 1 year. What is the quantity after 1 year?

15

Part B · Simple Interest

Find the simple interest for each investment.

05 \$200 at 4% for 6 months = **\$4**

06 \$200 at 4% for 4.5 years = **\$36**

07 \$400 at 4% for 6 months = **\$8**

08 \$1300 at 4% for 3 years = **\$156**



Grade 11 Exponential Growth & Finance Unit Test (Answer Key)

Part C · Compound Interest

Find the compound interest earned on each investment (compounded annually).

09 \$1100 at 4% for 2 years =
\$89.76

10 \$800 at 10% for 3 years =
\$264.80

11 \$1900 at 3% for 3 years =
\$176.18

12 \$1200 at 8% for 2 years =
\$199.68