# *Calculating Interest (7NS 1.7 ):*

Compound Interest

Name _____

Class _____ Date _____

Score _____

Kris deposits **$500** in an account that pays **6% interest** compounded yearly. What will the account balance be after **5 years**?

1. Calculate the **new balance** by multiplying the **principal** by: **(interest rate + 1)$^{time}$** where *time* is the amount of time the principal has been earning interest.

**New balance** = Principal $(1 + \text{interest rate})^{time}$

$= \$500\ (1 + .06)^5$ Plug in values

$= \$500\ (1.06)^5$ Add inside the *parenthesis*

$= \$500\ (1.34)$ Calculate *exponents*

$= \$669.11$ *Multiply*

**1) Eva deposits $100 in an account that pays 5% interest compounded yearly. What will the account balance be after 3 years?**

A. $110.25
B. $115.00
C. $115.76
D. $225.00

**2) Aaron deposits $450 in an account that pays 3% interest compounded yearly. What will the account balance be after 7 years?**

A. $471.00
B. $477.41
C. $553.44
D. $570.00

**3) Abbie deposits $1,020 in an account that pays 3.5% interest compounded yearly. What will the account balance be after 6 years?**

A. $1,253.84
B. $1,269.90
C. $1,055.70
D. $1080.00

**4) Adam deposits $16,000 in an account that pays 7.8% interest compounded yearly. What will the account balance be after 2 years?**

A. $18,000.23
B. $18,496.00
C. $18,694.34
D. $20,043.62

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**5) Alex deposits $135,292.12 in an account that pays 9.73% interest compounded yearly. What will the account balance be after 11 years?**

A. $312,033.28
B. $280,095.28
C. $342,394.12
D. $375,709.07

**6) Charlie deposits $500 in an account that pays 8% interest compounded yearly. Approximately how many years will it take for the bank account to reach $583.20?**

A. 9
B. 8
C. 7
D. 6

**7) Chrissie deposits $750 in an account that pays 6% interest compounded yearly. Approximately how many years will it take for the bank account to reach $891.08?**

A. 3
B. 2
C. 6
D. 4

**8) Ciara deposits $830 in an account that pays 2.7% interest compounded yearly. Approximately how many years will it take for the bank account to reach $1,237.75?**

A. 9
B. 10
C. 12
D. 15

**9) Casey deposits $52,340 in an account that pays 11.3% interest compounded yearly. Approximately how many years will it take for the bank account to reach $445,386.46?**

A. 10
B. 15
C. 20
D. 25

**10) Carter deposits $500,000.00 in an account that pays 7.21% interest compounded yearly. Approximately how many years will it take for the bank account to reach $3,055,538.08?**

A. 27
B. 26
C. 25
D. 24

**11) Daniel deposits his savings into a bank account that pays 2% interest compounded yearly. If after 6 years, his account has $225.23, how much did he originally deposit?**

A. $200
B. $250
C. $150
D. $300