Compound Interest and Logarithms

Please help with answers only.

1. Solve for x.

3x=12

solve by using the exponent property of the log function. Ans = **4**

2. Use the compound interest formula P(1+​r)t and the given information to solve for r.

A=​$2600, P=2100​, t=7. ​(Round to the nearest​ hundredth.)

3. Use the compound interest formula

A=​P(1+​r)t and the given information to solve for t.

A=​$45,000​, P=​$30,000​, r=8 percent. ​(Round to the nearest​ year.) ans. = **3mth**

4. Ann and Tom want to establish a fund for their​ grandson's college education. What lump sum must they deposit at a 9.6​% annual interest​ rate, compounded annually​, in order to have $30,000 in the fund at the end of 10 years? (Round up to the nearest​ cent.)

5. SIMPLE INETEREST FORMULA

5. Use the future value formula to determine the missing value.

A=​? P=​$1,900​, r=3​%, t=2 ans. =**2014**

6. Use the formula for future​ value, A=​P(1+​rt), and elementary algebra to find the missing quantity.

A=​$1,704​; r=6​%; t=7 years. Simplify your​ answer.) ans.= 1200

Annual Percentage Rate

7.Find the APR of the loan given the amount of the​ loan, the number and type of​ payments, and the​ add-on interest rate.

Loan​ amount, $9,000​; three yearly​ payments; rate=10​%

8. Find the finance charge per​ $100 for the loan described below.

​Loan, $2,400​; finance​ charge, $384

9. Luisa pays a finance charge of $152 on a 6​-month, $3,700 loan. Find the annual percentage rate using the annual percentage rate table. (Round to the nearest integer as​ needed.)

Top of Form

Bottom of Form

Please wait...Using the browser's print will lead to an undesirable print-out. Use the Print item from the "Question Help" menu to get a better print-out.**Annual Percentage Rate Table**

|  |  |
| --- | --- |
|  | APR |
|  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​10% | ​11% | ​12% | ​13% | ​14% | ​15% | ​16% |

 |
| Number of Payments | Finance Charge per​ $100 |
| 6 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​$2.94   | ​$3.23   | ​$3.53   | ​$3.83   | ​$4.12   | ​$4.42   | ​$4.72   |

 |
| 12 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​$5.50   | ​$6.06   | ​$6.62   | ​$7.18   | ​$7.74   | ​$8.31   | ​$8.88   |

 |
| 24 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​$10.75   | ​$11.86   | ​$12.98   | ​$14.10   | ​$15.23   | ​$16.37   | ​$17.51   |

 |
| 36 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​$16.16   | ​$17.86   | ​$19.57   | ​$21.30   | ​$23.04   | ​$24.80   | ​$26.57   |

 |
| 48 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ​$21.74   | ​$24.06   | ​$26.40   | ​$28.77   | ​$31.17   | ​$33.59   | ​$36.03   |

 |

10.Estimate the annual percentage rate for the​ add-on loan using the given number of payments and annual interest rate. Use the formula

APR ≈ 2nr Over n+ 1.

n=42​; r=7​%

(Round to two decimal places as​ needed.)

11. Think of the​ rent-to-own agreement as though it were an​ add-on loan. If the consumer rents until the item is paid​ for, find the finance charge per​ $100 financed.

Michael rents a TV worth $360 for monthly payments of $14. After 3 years​, he will own the TV.

The finance charge is?

​$