Name _____ Date _____

Year Group _____

Find the missing variable given that interest rate is compounded continuously
Round to the nearest cent

1. If *P* dollars is deposited in a savings account that pays interest at *r*% per year compounded continuously, find the balance after *t* years.
   $P = 1500$ $r = 5.25$ $t = 8$

$$A = Pe^{r*t}$$

$$A = \_\_\_\_ * e^{\_\_*\_\_}$$

$$A = \$\_\_\_\_$$

2. How much money, invested at an interest rate of *r*% per year compounded continuously, will amount to *A* dollars after *t* years?
   $A = 11200$ $r = 3$ $t = 15$

$$A = Pe^{r*t}$$

$$\_\_\_\_ = P * e^{\_\_*\_\_}$$

$$P = \$\_\_\_\_$$

3. An investment of *P* dollars increased to *A* dollars in *t* years. If interest was compounded continuously, find the interest rate. (round to nearest hundredth)
   $A = 19800$ $P = 550$ $t = 9$

$$A = Pe^{r*t}$$

$$\_\_\_\_ = \_\_\_\_ * e^{r*\_\_}$$

$$r = \_\_\_\_\%$$