

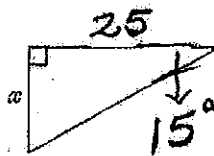
Act. #99 NCFE PRACTICE

Mary opened a saving account at a bank in Raleigh. She deposited \$4,000 at 6% interest compounded Continuously.

1. How much money will she have in 8 years if she does not withdrawal or deposit any over the 8 years?
2. To the nearest tenth, how long would it take for her money to triple?
3. To the nearest tenth, what would the interest rate need to be in order for her money to turn into \$7800 over the 8 yrs?

4. Find α to the nearest tenth.

- a) 6.5 b) 6.7
c) 24.5 d) 93.3



5. A jar contains 10 purple marbles and 2 red marbles. If two marbles are chosen at random with no replacement, what is the probability that 2 purple marbles are chosen?

- A. $\frac{25}{36}$ B. $\frac{5}{6}$ C. $\frac{15}{22}$ D. $\frac{1}{5}$

6. Find the sixth term of the geometric sequence for which $a_1 = 5$ AND $r = 3$!

7) Write in simplest form:
 $3 \ln x + 4 \ln x$ 1) _____

8) Evaluate: $8P_5 - 4C_2$ 2) _____

9) What is the probability of selecting a Queen, King, ACE, or JACK out of a full deck of cards? 3) _____

10) To the nearest tenths, find the mean, median, mode, range, outlier, STANDARD deviation AND VARIANCE.
43, 76, 49, 76, 82, 12, 43, 89, 86, 90

Mean = _____

MODE = _____

outlier = _____

Median = _____

Range = _____

Stan. dev. = _____

VARIANCE = _____

11) Given $W_{n+4} = W_{n+2} + 2(W_{n+3})$

$W_3 = 12, W_4 = 3$. Find the Next 3 terms. 5) _____

12) Write the equation that has twice the amplitude AND half the period of the equation $y = 5 \sin 8x$ 6) _____

13) What is the difference between 7 sophomores chosen out of 10 for class representatives AND 10 JUNIORS BEING ELECTED FOR PRESIDENT, VICE-PRESIDENT AND SECRETARY? 7) _____