



Introduction to Programming with Java

Task: TaylorExponential

Score: ★★☆☆☆

Prerequisites: ACM Task Force Commands

Description:

Taylor sums allows us to represent a wide range of functions in the form of a series sum. Exponential function is an example of it which can be expanded as follows

$$e^x = 1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots$$

As we go for higher denominators, series sum approximates to the actual value of exponential function evaluated at value x .

You are asked to implement **pow** function (*First your code starts/ends* block) and to calculate the Taylor sum for exponential function (*Second your code starts/ends* block) by using **pow** function you have implemented and **factorial** function we have given. **pow** function takes two parameters x and n and returns x^n

Sample Run 1:

```
Applet Viewer: TaylorExponential.class
x: 1
e^1.0: 2.7182818351251554
Applet started.
```

Sample Run 2:

