MATH 3307: Extra Credit for Homework 4

Reminders:

- Extra Credit questions are difficult and involve more work than a standard homework question.
- You will receive up to 10% additional points (not to exceed full credit) on the related Homework Assignment only. Keep in mind for an assignment graded out of 10 to 20 points, this is only 1 or 2 additional points.
- Unlike assigned homework questions, extra credit questions should not be brought to your instructor or to tutoring services for assistance.
- Correct Answers with valid explanation of your process will receive credit only.
- These are due the Sunday following their related Homework assignment by 11:59 pm.
- Submit Answers to https://forms.gle/yw89xJe8PBrqvF5J7 (Late Answers will not be accepted.)

The function, *f(x)*, when multiplied by a constant, *a*, is a probability density function for x on the interval [0, 10]. Using methods from calculus, it has been determined that the area between *f(x)* and the x-axis between the vertical lines x = 0 and x = k will be *g(k)* for:

$$g(x) = -\frac{x^5}{5} + \frac{11x^4}{2} - \frac{157x^3}{3} + 185x^2$$

If the mean of this continuous random variable is determined to be 3.571, determine the skewedness of this distribution.