Capstone Human Tests Writeup
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Group Issues:

1. **Improper Graph Rendering**
    a. Happy Path:
        i. Calling the get_graph() method on an Axes object and making sure that the Axes draw in continuous line(s) over the entire animation window. Test for different graphs, 1/x, x^2, x
    b. Bath paths:
        i. Calling the get_graph() method on an Axes object that does not have integer value parameters set for graph window (i.e. string value)
    c. Unusual paths:
        i. Make sure the animation window is properly drawing the graph that is explicitly specified
        ii. Make sure animation window is properly drawing the axes that are explicitly specified
2. **3D Axis Centering Itself**
    a. Happy Path:
        i. Calling the to_edge() and to_corner() methods on a ThreeDAxes object and making sure that the Axes draw touches the corners and edges, while not allowing for the view of the z-axis.
    b. Bath paths:
        i. Casting the ThreeDAxes object methods of to_edge() and to_corner() onto an Axes object without a z-axis.
        ii. After calling either to_edge() or to_corner() on a ThreeDAxes object, revert it to a Axes object by deleting one axis, and then call the same function again to check if the reversion allows for new function handling.
    c. Unusual paths:
        i. Changing the animation frame sizing after the to_edge() or to_corner() method call for the ThreeDAxes.
        ii. Calling the to_edge() and to_corner() methods on a ThreeDAxes object after already calling the fix_in_frame() method on the object.
3. **DecimalNumber.set_value() Resetting Color**
    a. Happy Path:
        i. Create a DecimalNumber object with a color parameter passed in as argument. Run the animation to make sure that the object display has the specified color. Then call the .set_value() function on DecimalNumber object and make sure the color has not changed
    b. Unusual paths:
        i. Make sure that when the DecimalNumber object has its value set to its current value that the color stays the same
        ii. Create multiple DecimalNumber objects and call set_value() on all of them and make sure all the colors stay the same

Personal Issues:

1. **Outline Color Correction -William Colarusso**
    a. Happy path:
        i. Calling the VGroup object on different Text objects and ensuring the black outline color of the letters draw on a white animation window background, try for letters A, B, C, D or E, F, G, H
    b. Bad paths:
        i. Calling the Text object on a color that is non-color string and ensuring the outline color for text objects is the same in animation window
        ii. Calling the Text object on a color that is non-string value and ensuring an error gets thrown to user
    c. Unusual paths:
        i. Ensure the background color specified in the .yml file does not influence the outline color
2. **Cannot Change Axis Color -Ian Washburn**
    a. Happy path:
        i. Calling the new set_color() method on an Axes object and making sure that the Axes turn that color in the animation. Test for 3 different colors: Green, Red, Blue
    b. Bad paths:
        i. Call the set_color() method with a non-color string and make sure that the color remains the same
        ii. Call the set_color() method with a non-string value and make sure an error is thrown to the user
        iii. Call the set_color() method with nothing in the argument and make sure an error is thrown to the user
    c. Unusual paths:
        i. Make sure when the color is trying to be set to the current color that it acts as expected
3. **Strange Object Fading -Thomas Smith**
    a. Happy Path:
        i. Call FadeTransformPieces() on a Tex object to fade to any mobject subobject class, such as Circle(), and check for no strange line breakdowns of the fade animation.
    b. Bath paths:
        i. Call FadeTransformPieces() on a Tex object to fade to a non-mobject class, and check for an error to be thrown to the user.
        ii. Call FadeTransformPieces() on a non-mobject class with any mobject subobject class, such as Circle(), and check that an error is thrown to the user.
    c. Unusual paths:
        i. Have different colors set then the defaults for either or both of the objects, and check the proper fade animation still functions.

ii. Change the animation speed configuration, and check to see if the proper fade animation still functions.

4. **Wrong Sized Rectangles -Ivanildo Araujo**
   a. Happy Path:
      i. Creating Riemann rectangles by taking the graph, x_ranges values, and dx as parameters. The area below the curve is divided in rectangles with equal width. Each rectangle moves upward from the x-axis and touches the curve at the top left or right corner.

   b. Bad Path:
      i. Calling Riemann rectangles and passing concave down graphs as a parameter. The method will produce rectangles only when the y-axis has a positive value.
      ii. Make sure using Parametric curves graphs

   c. Unusual Path:
      i. Make sure dx values has values greater than zero