

initializer

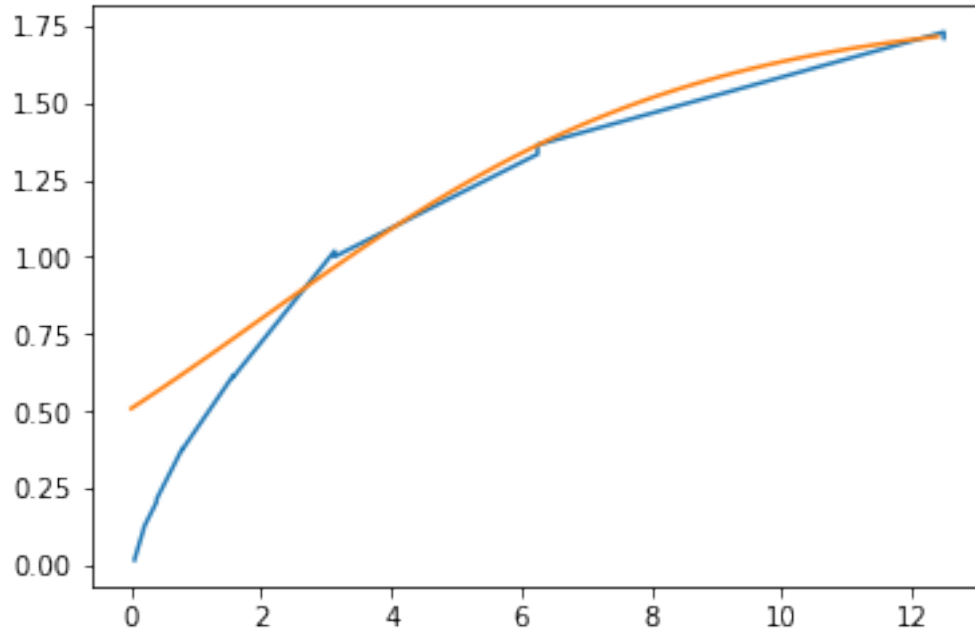
July 7, 2019

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In [2]: import numpy as np
import matplotlib.pyplot as plt
```

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In [13]: datx=[0.04882812,0.04882812,0.19531250,0.19531250,0.390625,0.390625,0.78125,0.78125,1.171875,1.171875,1.5625,1.5625,1.953125,1.953125,2.34375,2.34375,2.734375,2.734375,3.125,3.125,3.515625,3.515625,3.90625,3.90625,4.296875,4.296875,4.6875,4.6875,5.078125,5.078125,5.46875,5.46875,5.859375,5.859375,6.25,6.25,6.640625,6.640625,7.03125,7.03125,7.421875,7.421875,7.8125,7.8125,8.203125,8.203125,8.59375,8.59375,8.984375,8.984375,9.375,9.375,9.765625,9.765625,10.15625,10.15625,10.546875,10.546875,10.9375,10.9375,11.328125,11.328125,11.71875,11.71875,12.109375,12.109375,12.5,12.5]
daty=[0.017,0.018,0.121,0.124,0.206,0.215,0.377,0.374,0.614,0.609,1.019,1.001,1.334,1.316,1.647,1.629,1.959,1.941,2.271,2.253,2.582,2.564,2.892,2.874,3.202,3.184,3.512,3.494,3.822,3.804,4.132,4.114,4.442,4.424,4.752,4.734,5.062,5.044,5.372,5.354,5.682,5.664,5.992,5.974,6.302,6.284,6.612,6.594,6.922,6.904,7.232,7.214,7.542,7.524,7.852,7.834,8.182,8.164,8.512,8.494,8.842,8.824,9.172,9.154,9.502,9.484,9.832,9.814,10.162,10.144,10.492,10.474,10.822,10.804,11.152,11.134,11.482,11.464,11.812,11.794,12.142,12.124,12.472,12.454,12.802,12.784,13.132,13.114,13.462,13.444,13.792,13.774,14.122,14.104,14.452,14.434,14.782,14.764,15.112,15.094,15.442,15.424,15.772,15.754,16.102,16.084,16.432,16.414,16.762,16.744,17.092,17.074,17.422,17.404,17.752,17.734,18.082,18.064,18.412,18.394,18.742,18.724,19.072,19.054,19.402,19.384,19.732,19.714,20.062,20.044,20.392,20.374,20.722,20.704,21.052,21.034,21.382,21.364,21.712,21.694,22.042,22.024,22.372,22.354,22.702,22.684,23.032,23.014,23.362,23.344,23.692,23.674,24.022,24.004,24.352,24.334,24.682,24.664,25.012,25.094,25.342,25.324,25.672,25.654,26.002,25.984,26.332,26.314,26.662,26.644,26.992,26.974,27.322,27.304,27.652,27.634,27.982,27.964,28.312,28.294,28.642,28.624,28.972,28.954,29.302,29.284,29.632,29.614,29.962,29.944,30.292,30.274,30.622,30.604,30.952,30.934,31.282,31.264,31.612,31.594,31.942,31.924,32.272,32.254,32.602,32.584,32.932,32.914,33.262,33.244,33.592,33.574,33.922,33.904,34.252,34.234,34.582,34.564,34.912,34.894,35.242,35.224,35.572,35.554,35.902,35.884,36.232,36.214,36.562,36.544,36.892,36.874,37.222,37.204,37.552,37.534,37.882,37.864,38.212,38.194,38.542,38.524,38.872,38.854,39.202,39.184,39.532,39.514,39.862,39.844,40.192,40.174,40.522,40.504,40.852,40.834,41.182,41.164,41.512,41.494,41.842,41.824,42.172,42.154,42.502,42.484,42.832,42.814,43.162,43.144,43.492,43.474,43.822,43.804,44.152,44.134,44.482,44.464,44.812,44.794,45.142,45.124,45.472,45.454,45.802,45.784,46.132,46.114,46.462,46.444,46.792,46.774,47.122,47.104,47.452,47.434,47.782,47.764,48.112,48.094,48.442,48.424,48.772,48.754,49.102,49.084,49.432,49.414,49.762,49.744,50.092,50.074,50.422,50.404,50.752,50.734,51.082,51.064,51.412,51.394,51.742,51.724,52.072,52.054,52.402,52.384,52.732,52.714,53.062,53.044,53.392,53.374,53.722,53.704,54.052,54.034,54.382,54.364,54.712,54.694,55.042,55.024,55.372,55.354,55.702,55.684,56.032,56.014,56.362,56.344,56.692,56.674,57.022,57.004,57.352,57.334,57.682,57.664,58.012,58.094,58.342,58.324,58.672,58.654,59.002,58.984,59.332,59.314,59.662,59.644,60.092,60.074,60.422,60.404,60.752,60.734,61.082,61.064,61.412,61.394,61.742,61.724,62.072,62.054,62.402,62.384,62.732,62.714,63.062,63.044,63.392,63.374,63.722,63.704,64.052,64.034,64.382,64.364,64.712,64.694,65.042,65.024,65.372,65.354,65.702,65.684,66.032,66.014,66.362,66.344,66.692,66.674,67.022,67.004,67.352,67.334,67.682,67.664,68.012,68.094,68.342,68.324,68.672,68.654,69.002,68.984,69.332,69.314,69.662,69.644,70.092,70.074,70.422,70.404,70.752,70.734,71.082,71.064,71.412,71.394,71.742,71.724,72.072,72.054,72.402,72.384,72.732,72.714,73.062,73.044,73.392,73.374,73.722,73.704,74.052,74.034,74.382,74.364,74.712,74.694,75.042,75.024,75.372,75.354,75.702,75.684,76.032,76.014,76.362,76.344,76.692,76.674,77.022,77.004,77.352,77.334,77.682,77.664,78.012,78.094,78.342,78.324,78.672,78.654,79.002,78.984,79.332,79.314,79.662,79.644,80.092,80.074,80.422,80.404,80.752,80.734,81.082,81.064,81.412,81.394,81.742,81.724,82.072,82.054,82.402,82.384,82.732,82.714,83.062,83.044,83.392,83.374,83.722,83.704,84.052,84.034,84.382,84.364,84.712,84.694,85.042,85.024,85.372,85.354,85.702,85.684,86.032,86.014,86.362,86.344,86.692,86.674,87.022,87.004,87.352,87.334,87.682,87.664,88.012,88.094,88.342,88.324,88.672,88.654,89.002,88.984,89.332,89.314,89.662,89.644,90.092,90.074,90.422,90.404,90.752,90.734,91.082,91.064,91.412,91.394,91.742,91.724,92.072,92.054,92.402,92.384,92.732,92.714,93.062,93.044,93.392,93.374,93.722,93.704,94.052,94.034,94.382,94.364,94.712,94.694,95.042,95.024,95.372,95.354,95.702,95.684,96.032,96.014,96.362,96.344,96.692,96.674,97.022,97.004,97.352,97.334,97.682,97.664,98.012,98.094,98.342,98.324,98.672,98.654,99.002,98.984,99.332,99.314,99.662,99.644,100.092,100.074,100.422,100.404,100.752,100.734,101.082,101.064,101.412,101.394,101.742,101.724,102.072,102.054,102.402,102.384,102.732,102.714,103.062,103.044,103.392,103.374,103.722,103.704,104.052,104.034,104.382,104.364,104.712,104.694,105.042,105.024,105.372,105.354,105.702,105.684,106.032,106.014,106.362,106.344,106.692,106.674,107.022,107.004,107.352,107.334,107.682,107.664,108.012,108.094,108.342,108.324,108.672,108.654,109.002,108.984,109.332,109.314,109.662,109.644,110.092,110.074,110.422,110.404,110.752,110.734,111.082,111.064,111.412,111.394,111.742,111.724,112.072,112.054,112.402,112.384,112.732,112.714,113.062,113.044,113.392,113.374,113.722,113.704,114.052,114.034,114.382,114.364,114.712,114.694,115.042,115.024,115.372,115.354,115.702,115.684,116.032,116.014,116.362,116.344,116.692,116.674,117.022,117.004,117.352,117.334,117.682,117.664,118.012,118.094,118.342,118.324,118.672,118.654,119.002,118.984,119.332,119.314,119.662,119.644,120.092,120.074,120.422,120.404,120.752,120.734,121.082,121.064,121.412,121.394,121.742,121.724,122.072,122.054,122.402,122.384,122.732,122.714,123.062,123.044,123.392,123.374,123.722,123.704,124.052,124.034,124.382,124.364,124.712,124.694,125.042,125.024,125.372,125.354,125.702,125.684,126.032,126.014,126.362,126.344,126.692,126.674,127.022,127.004,127.352,127.334,127.682,127.664,128.012,128.094,128.342,128.324,128.672,128.654,129.002,128.984,129.332,129.314,129.662,129.644,130.092,130.074,130.422,130.404,130.752,130.734,131.082,131.064,131.412,131.394,131.742,131.724,132.072,132.054,132.402,132.384,132.732,132.714,133.062,133.044,133.392,133.374,133.722,133.704,134.052,134.034,134.382,134.364,134.712,134.694,135.042,135.024,135.372,135.354,135.702,135.684,136.032,136.014,136.362,136.344,136.692,136.674,137.022,137.004,137.352,137.334,137.682,137.664,138.012,138.094,138.342,138.324,138.672,138.654,139.002,138.984,139.332,139.314,139.662,139.644,140.092,140.074,140.422,140.404,140.752,140.734,141.082,141.064,141.412,141.394,141.742,141.724,142.072,142.054,142.402,142.384,142.732,142.714,143.062,143.044,143.392,143.374,143.722,143.704,144.052,144.034,144.382,144.364,144.712,144.694,145.042,145.024,145.372,145.354,145.702,145.684,146.032,146.014,146.362,146.344,146.692,146.674,147.022,147.004,147.352,147.334,147.682,147.664,148.012,148.094,148.342,148.324,148.672,148.654,149.002,148.984,149.332,149.314,149.662,149.644,150.092,150.074,150.422,150.404,150.752,150.734,151.082,151.064,151.412,151.394,151.742,151.724,152.072,152.054,152.402,152.384,152.732,152.714,153.062,153.044,153.392,153.374,153.722,153.704,154.052,154.034,154.382,154.364,154.712,154.694,155.042,155.024,155.372,155.354,155.702,155.684,156.032,156.014,156.362,156.344,156.692,156.674,157.022,157.004,157.352,157.334,157.682,157.664,158.012,158.094,158.342,158.324,158.672,158.654,159.002,158.984,159.332,159.314,159.662,159.644,160.092,160.074,160.422,160.404,160.752,160.734,161.082,161.064,161.412,161.394,161.742,161.724,162.072,162.054,162.402,162.384,162.732,162.714,163.062,163.044,163.392,163.374,163.722,163.704,164.052,164.034,164.382,164.364,164.712,164.694,165.042,165.024,165.372,165.354,165.702,165.684,166.032,166.014,166.362,166.344,166.692,166.674,167.022,167.004,167.352,167.334,167.682,167.664,168.012,168.094,168.342,168.324,168.672,168.654,169.002,168.984,169.332,169.314,169.662,169.644,170.092,170.074,170.422,170.404,170.752,170.734,171.082,171.064,171.412,171.394,171.742,171.724,172.072,172.054,172.402,172.384,172.732,172.714,173.062,173.044,173.392,173.374,173.722,173.704,174.052,174.034,174.382,174.364,174.712,174.694,175.042,175.024,175.372,175.354,175.702,175.684,176.032,176.014,176.362,176.344,176.692,176.674,177.022,177.004,177.352,177.334,177.682,177.664,178.012,178.094,178.342,178.324,178.672,178.654,179.002,178.984,179.332,179.314,179.662,179.644,180.092,180.074,180.422,180.404,180.752,180.734,181.082,181.064,181.412,181.394,181.742,181.724,182.072,182.054,182.402,182.384,182.732,182.714,183.062,183.044,183.392,183.374,183.722,183.704,184.052,184.034,184.382,184.364,184.712,184.694,185.042,185.024,185.372,185.354,185.702,185.684,186.032,186.014,186.362,186.344,186.692,186.674,187.022,187.004,187.352,187.334,187.682,187.664,188.012,188.094,188.342,188.324,188.672,188.654,189.002,188.984,189.332,189.314,189.662,189.644,190.092,190.074,190.422,190.404,190.752,190.734,191.082,191.064,191.412,191.394,191.742,191.724,192.072,192.054,192.402,192.384,192.732,192.714,193.062,193.044,193.392,193.374,193.722,193.704,194.052,194.034,194.382,194.364,194.712,194.694,195.042,195.024,195.372,195.354,195.702,195.684,196.032,196.014,196.362,196.344,196.692,196.674,197.022,197.004,197.352,197.334,197.682,197.664,198.012,198.094,198.342,198.324,198.672,198.654,199.002,198.984,199.332,199.314,199.662,199.644,200.092,200.074,200.422,200.404,200.752,200.734,201.082,201.064,201.412,201.394,201.742,201.724,202.072,202.054,202.402,202.384,202.732,202.714,203.062,203.044,203.392,203.374,203.722,203.704,204.052,204.034,204.382,204.364,204.712,204.694,205.042,205.024,205.372,205.354,205.702,205.684,206.032,206.014,206.362,206.344,206.692,206.674,207.022,207.004,207.352,207.334,207.682,207.664,208.012,208.094,208.342,208.324,208.672,208.654,209.002,208.984,209.332,209.314,209.662,209.644,210.092,210.074,210.422,210.404,210.752,210.734,211.082,211.064,211.412,211.394,211.742,211.724,212.072,212.054,212.402,212.384,212.732,212.714,213.062,213.044,213.392,213.374,213.722,213.704,214.052,214.034,214.382,214.364,214.712,214.694,215.042,215.024,215.372,215.354,215.702,215.684,216.032,216.014,216.362,216.344,216.692,216.674,217.022,217.004,217.352,217.334,217.682,217.664,218.012,218.094,218.342,218.324,218.672,218.654,219.002,218.984,219.332,219.314,219.662,219.644,220.092,220.074,220.422,220.404,220.752,220.734,221.082,221.064,221.412,221.394,221.742,221.724,222.072,222.054,222.402,222.384,222.732,222.714,223.062,223.044,223.392,223.374,223.722,223.704,224.052,224.034,224.382,224.364,224.712,224.694,225.042,225.024,225.372,225.354,225.702,225.684,226.032,226.014,226.362,226.344,226.692,226.674,227.022,227.004,227.352,227.334,227.682,227.664,228.012,228.094,228.342,228.324,228.672,228.654,229.002,228.984,229.332,229.314,229.662,229.644,230.092,230.074,230.422,230.404,230.752,230.734,231.082,231.064,231.412,231.394,231.742,231.724,232.072,232.054,232.402,232.384,232.732,232.714,233.062,233.044,233.392,233.374,233.722,233.704,234.052,234.034,234.382,234.364,234.712,234.694,235.042,235.024,235.372,235.354,235.702,235.684,236.032,236.014,236.362,236.344,236.692,236.674,237.022,237.004,237.352,237.334,237.682,237.664,238.012,238.094,238.342,238.324,238.672,238.654,239.002,238.984,239.332,239.314,239.662,239.644,240.092,240.074,240.422,240.404,240.752,240.734,241.082,241.064,241.412,241.394,241.742,241.724,242.072,242.054,242.402,242.384,242.732,242.714,243.062,243.044,243.392,243.374,243.722,243.704,244.052,244.034,244.382,244.364,244.712,244.694,245.042,245.024,245.372,245.354,245.702,245.684,246.032,246.014,246.362,246.344,246.692,246.674,247.022,247.004,247.352,247.334,247.682,247.664,248.012,248.094,248.342,248.324,248.672,248.654,249.002,248.984,249.332,249.314,249.662,249.644,250.092,250.074,250.422,250.404,250.752,250.734,251.082,251.064,251.412,251.394,251.742,251.724,252.072,252.054,252.402,252.384,252.732,252.714,253.062,253.044,253.392,253.374,253.722,253.704,254.052,254.034,254.382,254.364,254.712,254.694,255.0
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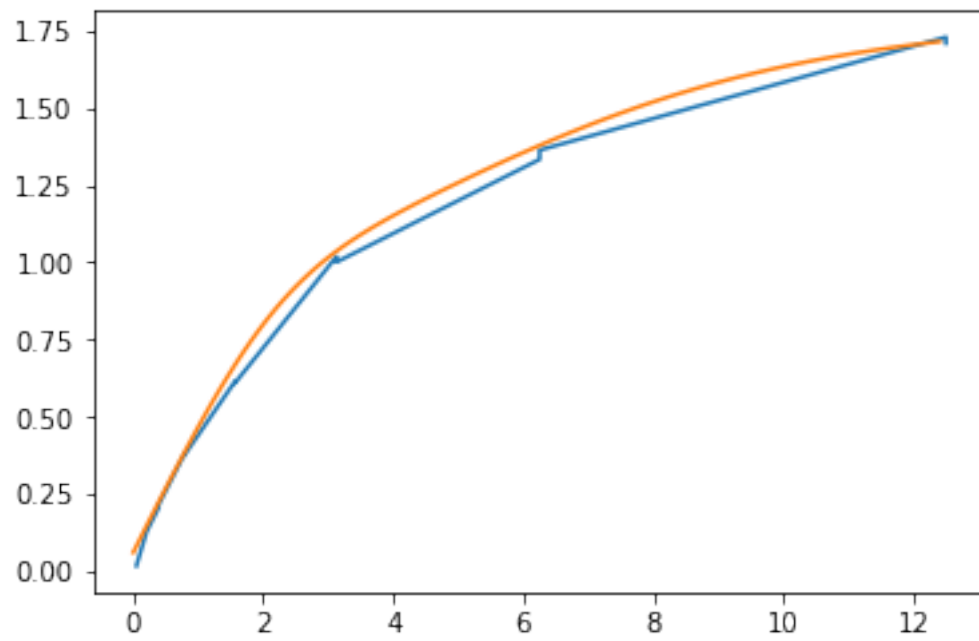
```
In [65]: plt.plot(datx,daty)
plt.plot(linx,simfun(linx,0,0.3,-0.6,2,-0.2,100,100))
```

```
Out[65]: [<matplotlib.lines.Line2D at 0x18eb0db55f8>]
```



```
In [69]: plt.plot(datx,daty)
plt.plot(linx,simfun(linx,0.4,0.3,-0.6,2,-0.2,1,-2))
```

```
Out[69]: [<matplotlib.lines.Line2D at 0x18eb0f3a940>]
```



In []: