

partial_dependency_experiment

October 28, 2025

1 about

This notebook demonstrates the the PQD dependence.

```
[1]: %load_ext autoreload
      %autoreload 2
      %load_ext rich
      %matplotlib inline
      import matplotlib.pyplot as plt

      # set up a global plt style for the script
      # plt.style.use('classic')
      plt.rcParams.update({
          "font.size": 11,
          "text.usetex": True,
          "font.family": "serif",
          "figure.figsize": (6, 4.5),
          "legend.fontsize": 'small',
      })
```

```
[2]: from pyuncertainnumber.pba.operation import positiveconv_pbox
      from pyuncertainnumber import pba
```

```
[11]: X = pba.uniform(1, 24)
      Y = X
```

```
[12]: p_test = positiveconv_pbox(X, Y)
```

```
[15]: fig, ax = plt.subplots()
      p_test.plot(ax=ax, label='test PQD', nuance='curve', fill_color='salmon',
          ↪bound_colors=['salmon', 'salmon'])
      (X+Y).plot(ax=ax, label='Frechet', nuance='curve')
      plt.show()
```

