shortdistance

July 5, 2022

[ ]:
```
import math
```

[ ]:
```
dir(math)
```

[ ]:
```
['__doc__',
 '__file__',
 '__loader__',
 '__name__',
 '__package__',
 '__spec__',
 'acos',
 'acosh',
 'asin',
 'asinh',
 'atan',
 'atan2',
 'atanh',
 'ceil',
 'comb',
 'copysign',
 'cos',
 'cosh',
 'degrees',
 'dist',
 'e',
 'erf',
 'erfc',
 'exp',
 'expm1',
 'fabs',
 'factorial',
 'floor',
 'fmod',
 'frexp',
 'fsum',
 'gamma',
 'gcd',
 'hypot',
```

```
 'inf',
 'isclose',
 'isfinite',
 'isinf',
 'isnan',
 'isqrt',
 'ldexp',
 'lgamma',
 'log',
 'log10',
 'log1p',
 'log2',
 'modf',
 'nan',
 'perm',
 'pi',
 'pow',
 'prod',
 'radians',
 'remainder',
 'sin',
 'sinh',
 'sqrt',
 'tan',
 'tanh',
 'tau',
 'trunc']
```

[ ]:
```
math.pow(5, 3)
```

[ ]:
```
125.0
```

[ ]:
```
from math import pow
pow(5, 3)
```

[ ]:
```
125.0
```

[ ]:
```
points = [(3,7), (4,3), (2,2), (0,5)]
flag = [(-2,-5), (-2,5), (-2, 5), (-2,5)]
def euclideanDistance(coordinate1, coordinate2):
    return pow(pow(coordinate1[0] - coordinate2[0], 2) + pow(coordinate1[1] -␣
 ↪coordinate2[1], 2), 0.5)
```

[ ]:
```
distances = []
for i in range(len(points)):
    distances += [euclideanDistance(flag[i], points[i])]
```

[ ]:
```
distances
```

[ ]:
```
[13.0, 6.324555320336759, 5.0, 2.0]
```

[ ]:
```
min(distances)
```

[ ]:
```
2.0
```

[ ]:
```

```