
```
A = [1 2; 2 4];
[isDiag, P, D, v] = assignment8(A)
```

```
P' * P           % ~ I
A - P*D*P'       % ~ 0
```

```
isDiag =
```

```
logical
```

```
1
```

```
P =
```

```
-0.8944    0.4472
0.4472    0.8944
```

```
D =
```

```
0      0
0      5
```

```
v =
```

```
0
5
```

```
ans =
```

```
1.0000    0.0000
0.0000    1.0000
```

```
ans =
```

```
1.0e-15 *
-0.2220   -0.4441
-0.4441   -0.8882
```