Part 1 — Roots and corresponding phase angles of a polynomial

```
clear
```

Given the polynomial

$$P(s) = (s^2 + 10s + 24)(s^4 + 26s^3 + 231s^2 + 766s + 560),$$

```
P = conv([1 10 24], [1 26 231 766 560])
```

```
P = 1×7
     1    36   515  3700 13764 23984 ···
```

1. we find the roots of the resulting polynomial

```
P_roots = roots(P)
```

```
P_roots = 6×1
  -10.0000
   -8.0000
   -7.0000
   -6.0000
   -4.0000
   -1.0000
```

2. and their corresponding phase angles

```
P_root_angles_in_deg = rad2deg(angle(P_roots));
tab_P_root_angles = table(P_roots, P_root_angles_in_deg)
```

tab_P_root_angles = 6×2 table

	P_roots	P_root_angles_in_deg
1	-10	180
2	-8	180
3	-7	180
4	-6	180
5	-4	180
6	-1	180