```
eps = 0.1;
a = 15 / 8;
b = 3 / 2;
II = 0;
F[u_, w_] = u - u^3 / 3 - w + II;
G[u_, w_] = eps (a + b u - w);
sol = Solve[F[u, w] == 0 && G[u, w] == 0, {u, w}]
Fu = D[F[u, w], u] /. sol;
Fw = D[F[u, w], w] /. sol;
Gu = D[G[u, w], u] /. sol;
Gw = D[G[u, w], w] /. sol;
(Fu + Gw) < 0
(Fu Gw - Fw Gu) > 0
```

Solve::ratnz : Solve was unable to solve the system with inexact coefficients. The answer was obtained by solving a corresponding exact system and numericizing the result. ≫

```
{{u → -1.5, w → -0.375}, {u → 0.75 - 1.78536 i, w → 3. - 2.67804 i},
 {u → 0.75 + 1.78536 i, w → 3. + 2.67804 i}}
```

```
{-1.35, 3.525 + 2.67804 i, 3.525 - 2.67804 i} < 0
```

```
{0.275, -0.2125 - 0.267804 i, -0.2125 + 0.267804 i} > 0
```

```
eps = 0.1;
a = 15 / 8;
b = 3 / 2;
II = 15 / 8;
F[u_, w_] = u - u^3 / 3 - w + II;
G[u_, w_] = eps (a + b u - w);
sol = Solve[F[u, w] == 0 && G[u, w] == 0, {u, w}]
Fu = D[F[u, w], u] /. sol;
Fw = D[F[u, w], w] /. sol;
Gu = D[G[u, w], u] /. sol;
Gw = D[G[u, w], w] /. sol;
(Fu + Gw) < 0
(Fu Gw - Fw Gu) > 0
```

Solve::ratnz : Solve was unable to solve the system with inexact coefficients. The answer was obtained by solving a corresponding exact system and numericizing the result. ≫

```
{{u → 0., w → 1.875}, {u → 0. - 1.22474 i, w → 1.875 - 1.83712 i},
 {u → 0. + 1.22474 i, w → 1.875 + 1.83712 i}}
```

```
{0.9, 2.4 + 0. i, 2.4 + 0. i} < 0
```

```
{0.05, -0.1 + 0. i, -0.1 + 0. i} > 0
```