

```

[Test]
[Category("Example")]
public void VelocityField2D()
{
    var x = new Variable<double> { Values = { 1.0, 2.0 } };
    var y = new Variable<double> { Values = { 1.0, 2.0, 3.0 } };
    var vx = new Variable<double>();
    var vy = new Variable<double>();

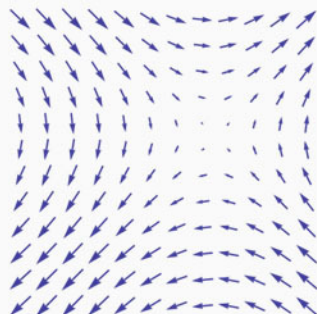
    var velocity = new Function
    {
        Components = { vx, vy },
        Arguments = { x, y }
    };

    // set vx, vy values as an array
    vx.SetValues(new[] { 100.0, 200.0, 300.0, 400.0, 500.0, 600.0 });
    vy.SetValues(new[] { 100.0, 200.0, 300.0, 400.0, 500.0, 600.0 });

    // set vx values using indexer
    vx[1.0, 1.0] = 100.0; vx[2.0, 1.0] = 400.0;
    vx[1.0, 2.0] = 200.0; vx[2.0, 2.0] = 500.0;
    vx[1.0, 3.0] = 300.0; vx[2.0, 3.0] = 600.0;
}

```

$$\vec{V} = (v_x, v_y)(x, y)$$



Arrays

v_x

v_y

x

y