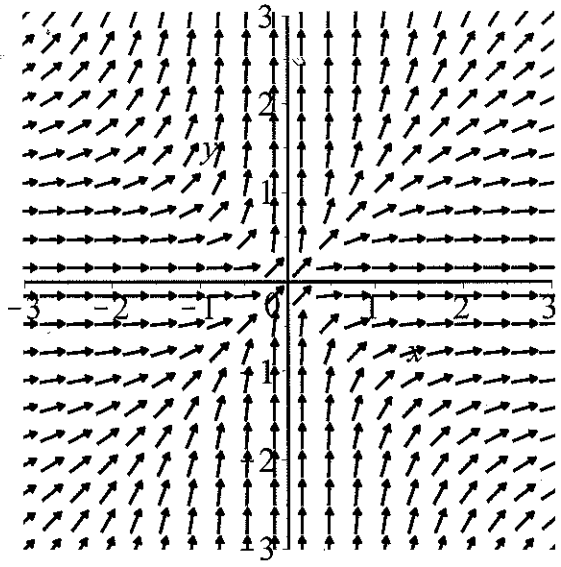
```
with(Student[VectorCalculus]):
SetCoordinates(cartesian[x, y]): F1 := VectorField(⟨x^2, y^2⟩); Divergence(F1);
```

$$(x^2)\bar{e}_x + (y^2)\bar{e}_y$$

$$2x + 2y \qquad \textbf{(1)}$$

```
VectorField(⟨x^2, y^2⟩, output = plot, view = [-3..3, -3..3], scaling = constrained, color = black,
    fieldoptions = [fieldstrength = fixed, arrows = SLIM, grid = [20, 20]]);
```

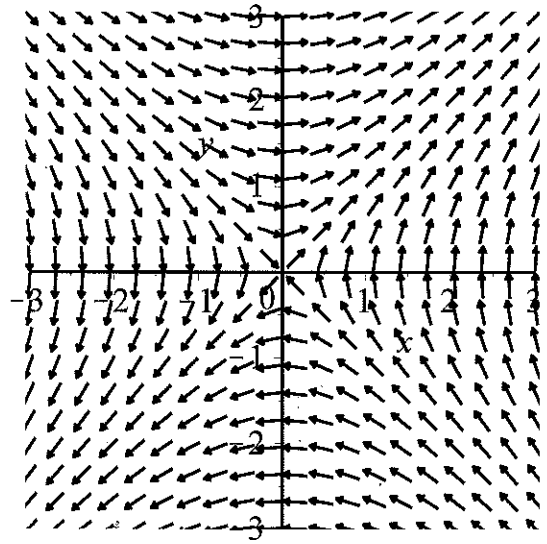



```
F2 := VectorField(⟨y, x⟩); Divergence(F2);
```

$$(y)\bar{e}_x + (x)\bar{e}_y$$

$$0 \qquad \textbf{(2)}$$

```
VectorField(⟨y, x⟩, output = plot, view = [-3..3, -3..3], scaling = constrained, color = black,
    fieldoptions = [fieldstrength = fixed, arrows = SLIM, grid = [20, 20]]);
```



$F3 := VectorField(\langle -x^2, 2\cdot y\rangle); Divergence(F3);$

$$-x^2\bar{e}_x + 2y\bar{e}_y$$

$$2 - 2x \qquad \textbf{(3)}$$

$VectorField(\langle -x^2, 2\cdot y\rangle, output = plot, view = [-3..3, -3..3], scaling = constrained, color = black,$
$fieldoptions = [fieldstrength = fixed, arrows = SLIM, grid = [20, 20]]);$