```
> restart
> EcuacionUno := diff(z(x,y),x$2) - 5·diff(z(x,y),x,y) + 6·diff(z(x,y),y$2) = 0
```

$$EcuacionUno := \frac{\partial^2}{\partial x^2} z(x,y) - 5\left(\frac{\partial^2}{\partial y\,\partial x} z(x,y)\right) + 6\left(\frac{\partial^2}{\partial y^2} z(x,y)\right) = 0 \quad (1)$$

```
> SolucionGralUno := pdsolve(EcuacionUno)
```

$$SolucionGralUno := z(x,y) = \_F1(y+2x) + \_F2(y+3x) \quad (2)$$

```
> EcuacionDos := diff(z(x,y),x$2) - 4·diff(z(x,y),x,y) + 4·diff(z(x,y),y$2) = 0
```

$$EcuacionDos := \frac{\partial^2}{\partial x^2} z(x,y) - 4\left(\frac{\partial^2}{\partial y\,\partial x} z(x,y)\right) + 4\left(\frac{\partial^2}{\partial y^2} z(x,y)\right) = 0 \quad (3)$$

```
> SolucionGralDos := pdsolve(EcuacionDos)
```

$$SolucionGralDos := z(x,y) = \_F1(y+2x) + \_F2(y+2x)\,x \quad (4)$$

```
> SolucionGralDosAlterna := z(x,y) = _F1(y+2x) + _F2(y+2x) ·y
```

$$SolucionGralDosAlterna := z(x,y) = \_F1(y+2x) + \_F2(y+2x)\,y \quad (5)$$

```
> Comprobacion[1] := simplify(eval(subs(z(x,y) = rhs(SolucionGralDos), EcuacionDos)))
```

$$Comprobacion_1 := 0 = 0 \quad (6)$$

```
> Comprobacion[2] := simplify(eval(subs(z(x,y) = rhs(SolucionGralDosAlterna),
    EcuacionDos)))
```

$$Comprobacion_2 := 0 = 0 \quad (7)$$

```
>
>
```