```
> restart
> Ecuacion := y" + 25·y = 116 ·exp(2·x)
```

$$Ecuacion := \frac{d^2}{dx^2} y(x) + 25\, y(x) = 116\, e^{2x} \quad (1)$$

```
> SolucionGeneral := dsolve(Ecuacion)
```

$$SolucionGeneral := y(x) = \sin(5x)\, \_C2 + \cos(5x)\, \_C1 + 4\, e^{2x} \quad (2)$$

```
> EcuaHom := lhs(Ecuacion) = 0
```

$$EcuaHom := \frac{d^2}{dx^2} y(x) + 25\, y(x) = 0 \quad (3)$$

```
> SolGralHom := y(x) = sin(5 x) _C2 + cos(5 x) _C1
```

$$SolGralHom := y(x) = \sin(5x)\, \_C2 + \cos(5x)\, \_C1 \quad (4)$$

```
> Comprobacion := eval(subs(y(x) = rhs(SolGralHom), EcuaHom))
```

$$Comprobacion := 0 = 0 \quad (5)$$

```
> SolPartNoHom := y(x) = 4·exp(2·x)
```

$$SolPartNoHom := y(x) = 4\, e^{2x} \quad (6)$$

```
> NoHom := eval(subs(y(x) = rhs(SolPartNoHom), lhs(EcuaHom)))
```

$$NoHom := 116\, e^{2x} \quad (7)$$

```
> SolGralDos := y(x) = rhs(SolGralHom) + NoHom
```

$$SolGralDos := y(x) = \sin(5x)\, \_C2 + \cos(5x)\, \_C1 + 116\, e^{2x} \quad (8)$$

```
> EcuaHom := y" + 25·y = 0
```

$$EcuaHom := \frac{d^2}{dx^2} y(x) + 25\, y(x) = 0 \quad (9)$$

```
> SolHom := dsolve(EcuaHom)
```

$$SolHom := y(x) = \_C1 \sin(5x) + \_C2 \cos(5x) \quad (10)$$

```
> restart
> SolGral := y(x) = _C1·exp( x)
```

$$SolGral := y(x) = \_C1\, e^{x} \quad (11)$$

```
> SolPartUno := subs(_C1 = 1, SolGral)
```

$$SolPartUno := y(x) = e^{x} \quad (12)$$

```
> SolPartDos := subs(_C1 = 2, SolGral)
```

$$SolPartDos := y(x) = 2\, e^{x} \quad (13)$$

```
> SolPartTres := subs(_C1 = 3, SolGral)
```

$$SolPartTres := y(x) = 3\, e^{x} \quad (14)$$

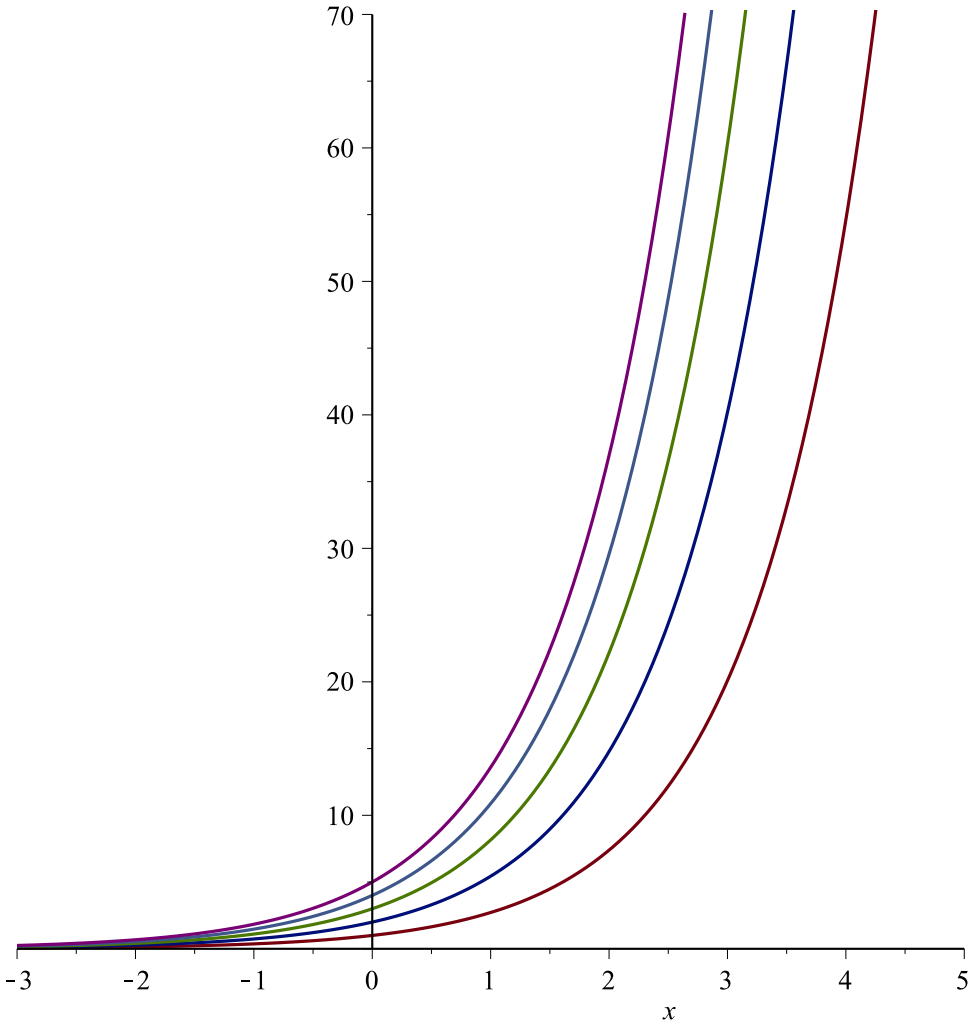
```
> SolPartCuatro := subs(_C1 = 4, SolGral)
```

$$SolPartCuatro := y(x) = 4\, e^{x} \quad (15)$$

```
> SolPartCinco := subs(_C1 = 5, SolGral)
```

$$SolPartCinco := y(x) = 5\, e^{x} \quad (16)$$

```
> plot([rhs(SolPartUno), rhs(SolPartDos), rhs(SolPartTres), rhs(SolPartCuatro),
      rhs(SolPartCinco)], x = -3 .. 8)
```



> *SolGral*

$$y(x) = \_C1\ e^{x} \tag{17}$$

>