

```
(%i1) p1:x**3+6*x**2+9*x+4;  
(%o1) x3+6 x2+9 x+4
```

```
(%i2) p2:x+1;  
(%o2) x+1
```



```
(%i4) l:divide(p1,p2);  
(%o4) [x2+5 x+4, 0]
```

```
(%i5) Quotient:l[1];  
(%o5) x2+5 x+4
```

```
(%i6) Rest:l[2];  
(%o6) 0
```

```
Der Rechenaufwand ohne Maxima ist auf  
den Folgeseiten aufgelistet!
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$$1. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2$$



Hier wird eine Polynom-  
division mustergültig  
erklärt!

$$2. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2$$



$$3. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2$$

$$\begin{array}{r} -(x^3 + x^2) \\ \hline 5x^2 \end{array}$$

$$4. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2$$

$$\begin{array}{r} -(x^3 + x^2) \quad \downarrow \\ \hline 5x^2 + 9x \end{array}$$

$$5. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x$$

$$\begin{array}{r} -(x^3 + x^2) \\ \hline 5x^2 + 9x \end{array}$$

$$6. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x$$

$$\begin{array}{r} (x^3 + 6x^2 + 9x + 4) \\ -(x^3 + \quad x^2) \\ \hline 5x^2 + 9x \\ 5x^2 + 5x \quad \leftarrow \end{array}$$

$$7. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x$$

$$\begin{array}{r} (x^3 + 6x^2 + 9x + 4) \\ -(x^3 + \quad x^2) \\ \hline 5x^2 + 9x \\ -(5x^2 + 5x) \\ \hline 4x \end{array}$$

$$8. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x$$

$$\begin{array}{r} (x^3 + 6x^2 + 9x + 4) \\ -(x^3 + \quad x^2) \\ \hline 5x^2 + 9x \\ -(5x^2 + 5x) \\ \hline 4x + 4 \end{array}$$

$$9. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x + 4$$

$$\begin{array}{r} (x^3 + 6x^2 + 9x + 4) \\ -(x^3 + \quad x^2) \\ \hline 5x^2 + 9x \\ -(5x^2 + 5x) \\ \hline 4x + 4 \end{array}$$

$$10. \quad (x^3 + 6x^2 + 9x + 4) : (x + 1) = x^2 + 5x + 4$$

$$\begin{array}{r} (x^3 + 6x^2 + 9x + 4) \\ -(x^3 + \quad x^2) \\ \hline 5x^2 + 9x \\ -(5x^2 + 5x) \\ \hline 4x + 4 \\ 4x + 4 \quad \leftarrow \\ \hline 0 \text{ REST} \end{array}$$