1) $(y^5 - y^2 + 6y - 4) : (y+1)$

	1	0	0	-1	6	-4
-1		-1	1	-1	+2	-8
	1	-1	1	-2	8	-12

$Q(y) = y^4 - y^3 + y^2 - 2y + 8$

$R(y) = -12$

2) $\frac{1}{2}b^3 + b^2 + 2b^2c + 4c^2 + 2bc^2 + 4bc =$

$= (b+2c)^2 + \frac{1}{2}b(b^2 + 4bc + 4c^2) =$

$= (b+2c)^2 + \frac{1}{2}b(b+2c)^2 =$

$= (b+2c)^2\left(1 + \frac{1}{2}b\right)$

3) $a^3 - 5a^2 + 3a + 9$

± 1
± 3
± 9

$R(1) = 1 - 5 + 3 + 9 \neq 0$

$R(-1) = (-1)^3 - 5(-1)^2 + 3(-1) + 9 =$

$= -1 - 5 - 3 + 9 = 0$

$$
\begin{array}{r|rrr|r}
 & 1 & -5 & 3 & 9 \\
-1 & & -1 & 6 & -9 \\
\hline
 & 1 & -6 & 9 & // \\
\end{array}
$$

$a^3 - 5a^2 + 3a + 9 = (a+1)(a^2 - 6a + 9) =$

$= (a+1)(a-3)^2$

4) $6x^2+5x+1$

± 1 $\quad$ ± 1

± 2

± 3 $\quad$ $\pm \frac{1}{2}$

± 6 $\quad$ $\pm \frac{1}{3}$

$\pm \frac{1}{6}$

$R(1) = 6+5+1 = 12 \neq 0$

$R(-1) = 6-5+1 = 2 \neq 0$

$R\left(\frac{1}{2}\right) = 6 \cdot \frac{1}{4} + 5 \cdot \frac{1}{2} + 1 \neq 0$

$R\left(-\frac{1}{2}\right) = \overset{3}{\cancel{6}} \cdot \frac{1}{\underset{2}{\cancel{4}}} - 5 \cdot \frac{1}{2} + 1 = 0$

	6	5	1
$-\frac{1}{2}$		-3	-1
	6	2	0

$\left(x+\frac{1}{2}\right)(6x+2)$

Teorema: $a_2x^2+a_1x+a_0=0$

$p/q \in \mathbb{Q}$ con $p \mid a_0$ e $q \mid a_2$

$$\boxed{b \mid a \Leftrightarrow a = br}$$