12/2/2020

59 $(b^3 + 2b + 1) : (b + 1)$

$b^3 + 2b + 1 \mid b + 1$

$-b^3 - b^2$ $\quad\quad b^2 - b + 3$

$// \quad -b^2 + 2b + 1$

$+b^2 + b$

$// \quad 3b + 1$

$-3b - 3$

$// \quad -2$

$Q(b) = b^2 - b + 3$

$R = -2$

73 $(m^5 - 2m^3 + m + 1) : (m^2 + m + 1)$

$m^5 - 2m^3 + m + 1 \mid m^2 + m + 1$

$-m^5 - m^4 - m^3$ $\quad\quad m^3 - m^2 - 2m + 3$

$// \quad -m^4 - 3m^3 + m + 1$

$+m^4 + m^3 + m^2$

$// \quad -2m^3 + m^2 + m + 1$

$+2m^3 + 2m^2 + 2m$

$// \quad 3m^2 + 3m + 1$

$-3m^2 - 3m - 3$

$// \quad // \quad -2$

$Q(m) = m^3 - m^2 - 2m + 3$

$R = -2$

65 $(x^5 + x - x^2 + 1) : (x^3 + 1)$

$$\begin{array}{r|l} x^5 - x^2 + x + 1 & x^3 + 1 \\ -x^5 \quad\quad\quad & x^2 \\ \hline // \quad -2x^2 + x + 1 & \end{array}$$

$Q(x) = x^2$

$R(x) = -2x^2 + x + 1$

98 $(x^3 + 2x^2 + x + 1) : (x - 2)$

	1	2	1	1
2		2	8	18
	1	4	9	19

$Q(x) = x^2 + 4x + 9$

$R = 19$

99 $(2a^4 - a^2 - a + 1) : (a + 1)$

	2	0	-1	-1	1
-1		-2	2	-1	2
	2	-2	1	-2	3

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

$R = 3$

Determina il resto della divisione senza effettuarla

135 $(x^4 + x^3 - x^2 - 1) : (x + 2)$ $\quad x-(-2)$

$P(x)$ $\qquad a = -2$

$R = P(-2) = (-2)^4 + (-2)^3 - (-2)^2 - 1 = 16 - 8 - 4 - 1 = 3$

138 $(t^4 - t^3 - 2t^2 - 2t + 4) : (t - 2)$

$P(t)$ $\qquad a = 2$

$R = P(2) = 2^4 - 2^3 - 2 \cdot 2^2 - 2 \cdot 2 + 4 = 16 - 8 - 8 - 4 + 4 = 0$

Stabilire per quali binomi è divisibile il polinomio

145 $3a^4 - a^3 - a - 1$ $\qquad a - 1,\ a + 1,\ a + 2$

$P(a)$

1) $a - 1$ $\qquad P(1) = 3 - 1 - 1 - 1 = 0$ $\qquad$ SÍ

2) $a + 1$ $\qquad P(-1) = 3 + 1 + 1 - 1 = 4$ $\qquad$ NO

3) $a + 2$ $\qquad P(-2) = 3 \cdot (-2)^4 - (-2)^3 - (-2) - 1 =$

$= 3 \cdot 16 + 8 + 2 - 1 \neq 0$ $\qquad$ NO