

[Plataforma :)]

1) $x^2 - y^2$

$$x^2 - y^2 = (x - y)(x + y)$$

R// $(x - y)(x + y)$

2) $4x^2 - 81y^4$

$$\downarrow$$
$$2^2 x^2 - 81 y^4$$

$$\downarrow$$
$$2^2 x^2 - 9^2 y^4$$

$$\downarrow$$
$$2^2 x^2 - 9^2 y^{2 \times 2}$$

$$\downarrow$$
$$(2)^2 - 9^2 y^{2 \times 2}$$

$$\downarrow$$
$$(2x)^2 - 9^2 \times (y^2)^2$$

$$\downarrow$$
$$(2x)^2 - (9y^2)^2$$

R// $(2x - 9y^2)(2x + 9y^2)$

$$3) \quad 27a^3 - 8b^6$$

$$\downarrow$$

$$3^3 a^3 - 8b^6$$

$$\downarrow$$

$$3^3 a^3 - 2^3 b^6$$

$$\downarrow$$

$$3^3 a^3 - 2^3 b^{3 \times 2}$$

$$\downarrow$$

$$(3a)^3 - 2^3 b^{3 \times 2}$$

$$\downarrow$$

$$(3a)^3 - 2^3 \times (b^2)^3$$

$$\downarrow$$

$$(3a)^3 - (2b^2)^3$$

$$\downarrow$$

$$(3a - 2b^2) \times (3a)^2 + 3a \times 2b^2 + (2b^2)^2$$

$$(3a - 2b^2) \times (9a^2 + 6ab^2 + (2b^2)^2)$$

$$(3a - 2b^2) \times (9a^2 + 6ab^2 + 4b^4)$$

$$\text{Ans} \quad (3a - 2b^2) (9a^2 + 6ab^2 + 4b^4)$$

$$4) 64m^3 + 125n^5$$

$$5) m^6 - 216$$

$$m^6 + 6m^4 + 36m^2 - 6m^4 - 36m^2 - 2$$

$$\downarrow$$

$$(m^4 + 6m^2 + 36)m^2 - 6(m^4 + 6m^2)$$

$$\downarrow$$

$$(m^2 - 6)(m^4 + 6m^2 + 36)$$

$$R// (m^2 - 6)(m^4 + 6m^2 + 36)$$

.. 6) $125x^3 + 1000y^5$

↓

$$125x^3 + 1000y^5$$

↓

$$125x^3 + 8 \times 125y^5$$

↓

$$125(x^3 + 8y^5)$$

7) ~~1~~ $100m^2 - 81n^2$

$$100m^2 - 81n^2$$

↓

$$(10m)^2 - (9n)^2$$

↓

$$(10m)^2 - (9n)^2 = (10m + 9n)(10m - 9n)$$

↓

R// $(10m + 9n)(10m - 9n)$

8) $49a^4 - 36b^2$

$\downarrow$
 $49a^4 - 36b^2$

$\downarrow$
 $(7a^2)^2 - (6b)^2$

$\downarrow$
 $(7a^2)^2 - (6b)^2 = (7a^2 + 6b)(7a^2 - 6b)$

$\downarrow$
 $R // (7a^2 + 6b)(7a^2 - 6b)$