

## Remédiation 2

exo 2 :

$$1) \frac{3}{\sqrt{7}} = \frac{3\sqrt{7}}{\sqrt{7^2}} = \frac{3\sqrt{7}}{7} \quad 2) \sqrt{72} = \sqrt{36 \times 2} = \sqrt{36} \sqrt{2} = 6\sqrt{2}$$

$$3) \frac{\sqrt{45} - \sqrt{5}}{\sqrt{10}} = \frac{\sqrt{9 \times 5} - \sqrt{5}}{\sqrt{2 \times 5}} = \frac{\sqrt{9} \sqrt{5} - \sqrt{5}}{\sqrt{2} \sqrt{5}} = \frac{\sqrt{9} - 1}{\sqrt{2}} = \frac{2}{\sqrt{2}} = \sqrt{2}$$

$$4) \frac{1}{2 - \sqrt{5}} = \frac{2 + \sqrt{5}}{(2 - \sqrt{5})(2 + \sqrt{5})} = \frac{2 + \sqrt{5}}{4 - 5} = -2 - \sqrt{5}$$

exo 3

$$1) \frac{\sqrt{2} - \sqrt{24}}{\sqrt{3}} = \frac{\sqrt{4} \sqrt{3} - \sqrt{8} \sqrt{3}}{\sqrt{3}} = \sqrt{4} - \sqrt{8} = 2 - 2\sqrt{2}$$

$$2) \frac{1 - 2\sqrt{2}}{1 + \sqrt{2}} = \frac{(1 - 2\sqrt{2})(1 - \sqrt{2})}{1^2 - (\sqrt{2})^2} = \frac{1 - 2\sqrt{2} - \sqrt{2} + 2\sqrt{2}^2}{-1} = 3\sqrt{2} - 5$$

$$3) \frac{1}{1 + \frac{1}{1 + \sqrt{3}}} = \frac{1 + \sqrt{3}}{(1 + \sqrt{3}) + 1} = \frac{(1 + \sqrt{3})(2 - \sqrt{3})}{2^2 - \sqrt{3}^2} = \sqrt{3} - 1$$

$$4) \left( \frac{1}{\sqrt{2}} - \frac{1}{\sqrt{3}} \right)^2 = \frac{1}{2} - \frac{2}{\sqrt{2}\sqrt{3}} + \frac{1}{3} = \frac{5}{6} - \frac{2}{\sqrt{6}} = \frac{5 - 2\sqrt{6}}{6}$$

$$5) \frac{x}{\sqrt{2x}} = \frac{x\sqrt{2x}}{2x} = \frac{\sqrt{2x}}{2}$$

$$6) \frac{\sqrt{3x} + x}{x - \sqrt{x}} = \frac{\sqrt{3}\sqrt{x} + \sqrt{x}^2}{\sqrt{x}^2 - \sqrt{x}} = \frac{\sqrt{3} + \sqrt{x}}{\sqrt{x} - 1} = \frac{(\sqrt{3} + \sqrt{x})(\sqrt{x} + 1)}{\sqrt{x}^2 - 1^2} \\ = \frac{\sqrt{3}\sqrt{x} + x + \sqrt{3} + \sqrt{x}}{x - 1}$$