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Info P2A
8 mai

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5,5 pts
8

4,4

$$(1) x^2 - 51x + 440 = 0$$

$$(2) x(x+10)+9 = 0$$

$$(3) 2x(x+5) \Rightarrow 5+x^2$$

$$(4) (x-15) \cdot (x+15) = 40x$$

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$1) a=1 \quad b=51 \quad c=440$$

$$x = \frac{+51 \pm \sqrt{51^2 - 4 \cdot 440}}{2} \Rightarrow x = \frac{51 \pm \sqrt{2601 - 1760}}{2} \Rightarrow$$

$$11 \quad x = \frac{51 \pm \sqrt{841}}{2} \Rightarrow x = \frac{51 + 29}{2} = \frac{80}{2} = 40 \quad \checkmark$$

$$\Rightarrow x = \frac{51 - 29}{2} = \frac{22}{2} = 11 \quad \checkmark$$

$$x^I = 40$$

$$x^{II} = 11$$

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

2)

$$x(x+10)+9=0$$

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$$x^2 + 10x + 9 = 0 \quad \checkmark$$

$$a=1 \quad b=10 \quad c=9$$

11

$$x = - \frac{10 \pm \sqrt{10^2 - 4 \cdot 9}}{2} \Rightarrow x = \frac{10 \pm \sqrt{100 - 36}}{2} \Rightarrow$$

$$x = \frac{10 \pm \sqrt{64}}{2} \Rightarrow x = \frac{10 \pm 8}{2} \Rightarrow \frac{10+8}{2} \Rightarrow 9 \quad \checkmark$$

$$x = \frac{10-8}{2} \Rightarrow 1 \quad \checkmark$$

$$x' = -9 \quad \checkmark$$

$$x'' = -1 \quad \checkmark$$

$$3) 2x(x+5) \Rightarrow 5x^2$$

$$\rightarrow 5x^2 + 2x^2 + 10x = 0$$

$$\rightarrow 5x^2 + 10x + 0 = 0$$

$$a=5 \quad b=10 \quad c=0$$

$$x = \frac{-10 \pm \sqrt{100 - 0}}{2} \Rightarrow \frac{-10 \pm 10}{2} \Rightarrow \frac{-10+10}{2} = \frac{0}{2} = 0 \quad \checkmark$$

0,5

$$x' = 0$$

$$x'' = -10$$

$$\Rightarrow \frac{-10-10}{2} = \frac{-20}{2} = -10 \quad \checkmark$$

à cause de votre écriture!!!

$$4) (x-15) \cdot (x+15) = 40x$$

$$x^2 + 15x - 15x - 225 = 40x$$

$$x^2 - 40x - 225 = 0 \quad \checkmark$$

$$a = 1 \quad b = -40 \quad c = -225$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2} = \frac{40 \pm \sqrt{1600 - 4 \cdot 1 \cdot (-225)}}{2} = \frac{40 \pm \sqrt{1825}}{2}$$

$$\Rightarrow \frac{40 \pm \sqrt{26.45}}{2} \Rightarrow \frac{40 + \sqrt{26.45}}{2} = 33.225$$

$$\Rightarrow \frac{40 - \sqrt{26.45}}{2} = 6.775$$

$$x' = 33.225$$

$$x'' = 6.775$$