Example: Part 3

$4x^2 - 12x + 9$

$\sqrt{4x^2} = 2x$ $\qquad$ $\sqrt{9} = 3$

$2(2x)(3)$

✓ Checks

So it is a PST!

To check if this is a PST we:

① Take $\sqrt{\text{first term}}$

② Take $\sqrt{\text{last term}}$

③ Multiply those square roots: $(2x)(3) = 6x$

④ Double the product. Do you get the middle term? (with ±, that part doesn't matter for seeing if it's a PST)

We can now factor it:

$4x^2 - 12x + 9 = (\ ?\ )^2$

Remember:

$a^2 \pm 2ab + b^2 = (a \pm b)^2$ ← factoring formula.

minus

$4x^2 - 12x + 9 = (\ \_\ )^2$

$4x^2 - 12x + 9 = (2x - \ )^2$

$4x^2 - 12x + 9 = (2x - 3)^2$