Can you factor this problem?

Using difference of perfect squares on the first two terms

AND ALSO SEPERATELY BY

Expanding and then factoring.

AND GET THE SAME FACTORS?

$$\underbrace{a^2 \quad - \quad b^2}$$

wait on this

$$\underline{(4x-2)^2 - (2x+2)^2} - 12x(x-2)$$

Difference of Perfect Squares

$$\big(4x-2 -(2x+2)\big)\big(4x-2+2x+2\big) \; - \; 12x(x-2)$$

$$(2x-4)(6x) \qquad\qquad -12x(x-2)$$

Factor out   bring
a 2   infront

$$2\cdot 6x(x-2) \; - \; 12x(x-2)$$

$$12x(x-2) - 12x(x-2)$$

$$12x(x-2)\big[\, 1 - 1 \,\big]$$

$$12x(x-2)\big[\, 0 \,\big]$$

$$= \quad 0$$