Name $\qquad$ Date $\qquad$
A regular octagon has a side length of $\frac{3}{4} x-\frac{1}{4}$. A regular hexagon has a side length of $12-x$.

$$
\frac{3}{4} x-\frac{1}{4}
$$




The difference between the perimeters of the two shapes is represented by the expression $8\left(\frac{3}{4} x-\frac{1}{4}\right)-6(12-x)$.

Write an expression equivalent to $8\left(\frac{3}{4} x-\frac{1}{4}\right)-6(12-x)$ using the fewest possible terms. Show all work neatly and clearly.

Name $\qquad$ Date $\qquad$

Which expression(s) is/are equivalent to $8-2(5 x-3)$. Explain or show work to justify your decision.

| Expression | Equivalent? <br> (yes or no) |  |
| :---: | :---: | :---: |
| $6(5 \mathrm{x}-3)$ |  |  |
| $8-10 \mathrm{x}+6$ |  |  |
| $8-(10 \mathrm{x}-6)$ |  |  |
| $8-10 \mathrm{x}-6$ |  |  |
| $-10 \mathrm{x}+14$ |  |  |

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