

Identifying Equivalent Expressions Step-by-Step Lesson

Problem type 1: Which of the expressions is equal to: $2(4x - 16)$

a) $8x - 30$

b) $4x - 32$

c) $8x - 32$

d) $x - 32$

Explanation:

Notice that the 2 is outside of the brackets. This indicates that we can

Multiply to extend the expression. Let's multiply it out and see what we get:

$$2(4x - 16) = (2 * 4)x - (2 * 16) = 8x - 32$$

This is the same as choice "c".



Problem type 2: Fill in the following missing item:

$$2l - 8m + 14n = 2(l - 4m + \underline{\quad})$$

Explanation:

We can start by extending our the expression on the right.

$$2(l - 4m + \underline{\quad}) = (2 * l) - (2 * 4)m + (2 * \underline{\quad}) = 2l - 8m + 2\underline{\quad}$$

We now set the original expressions equal to each other:

$$2l - 8m + 14n = 2l - 8m + 2\underline{\quad}$$

We can see that the $2l - 8m$ portion of each expression is already equal. We are just concerned about

$$14n = 2\underline{\quad}$$

$$\text{Solve for } \underline{\quad}. \quad 14n = 2\underline{\quad} \quad 7n = \underline{\quad}$$

