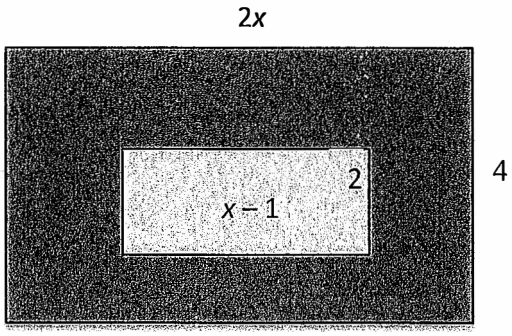
STUDENT MATERIALS

TASK 1: A SHADY OPERATION

The shaded region represents the deck around a pool (the inside rectangle).



A group of four friends agreed that the expression $(2x)(4) - 2(x-1)$ represents the area of just the deck.

Each of them simplified the expression. However, only one of them simplified it correctly. Look at each step in their thinking on this page. Describe the mistake made in each solution in the space provided. For the one that is correct, write "Correct"

Abby's thinking:

didn't multiply correctly

$(2x)(4) - 2(x-1)$
$2x - 8(x-1)$
$2x - 8x + 8$
$-6x + 8$

Barry's thinking:

$(2x)(4) - 2(x-1)$
$8x - 2(-x)$ didn't
$8x + 2x$ distribute
$10x$ right

Cloretta's thinking:

$(2x)(4) - 2(x-1)$
$8x - 2(x-1)$
$8x - 2x - 2$ → wrong sign
$6x - 2$

negative X negative = positive

Davis's thinking:

$(2x)(4) - 2(x-1)$
$8x - 2(x-1)$
$8x - 2x + 2$
$6x + 2$

correct

TASK 2: OPERATION X

Place an X in the box next to every expression that can be rewritten as $4x + 6$. Workspace has been left under each problem.

☐ $2x(2x + 3)$

$2x^2 + 6x$

☐ $(4x + 3)(x + 2)$

$4x \cdot 8 \cdot x$

$4(x^2) + 8x + 3x + 6$

$4(x^2) + 12x + 6$

☒ $2(2x + 3)$

$4x + 6$

☐ $4(x + 1) + 5$

$4x + 4 + 5$

$4x + 9$

☐ $2(2x) + 3$

$4x + 3$

☒ $x + x + x + x + (2)(3)$

$4x + 6$

☐ $6x(x + 6) - 2x$

$6(x^2) + 36x - 2x$

$6(x^2) + 34x$

☒ $4(x + 3) - 6$

$4x + 12 - 6$

$4x\ 6$

REFLECTION

Write your responses to each of the following reflection questions:

1. In Task 1, which type of mistake do you think is the most common for students to make? What advice would you give students to avoid making that mistake in their work?

I think the most common mistake would be incorrect distribution

2. In Task 2, were there any expressions that you knew were not equivalent quickly without having to do a lot of computation? If so, what were some things you noticed about those expressions that helped you?

All of the equations were the same difficulty