3) (10 pts) ALG (Stacks)
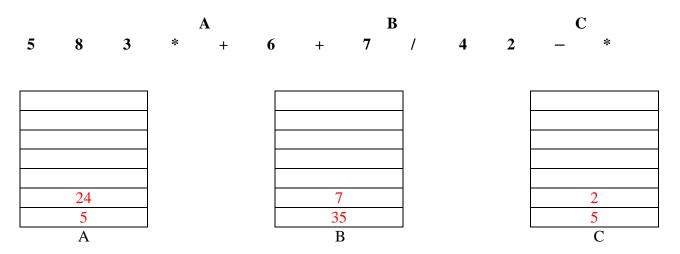
Use a stack to evaluate the postfix expression below. Please show the state of the stack at the exact point in time during the algorithm that the marked (A, B, C) locations are reached while processing the expression. Also, write down the equivalent infix expression, placing parentheses when necessary.

			A				**B**				**C**	
5	**8**	**3**	*****	**+**	**6**	**+**	**7**	**/**	**4**	**2**	**−**	*****

A
24
5

B
7
35

C
2
5

Value of the Expression: <u>10</u>

Equivalent Infix Expression: <u>$(5 + (8 * 3) + 6) / 7 * (4 − 2)$</u>

Grading: 2 pts per stack, 1 pt expression, 3 pts expression - extra parens allowed, assign partial as needed.