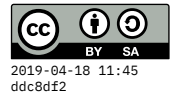


Quiz 4

10 April 2019



Solutions

Questions

1. Below are two expressions written in **prefix notation**. Evaluate them and show the final result. **Note:** thanks to the parentheses, a prefix operator can have more than two operands.

$$\begin{aligned} & \bullet (* (+ 4 1) (- (+ 5 2) 3)) \\ & = (* 5 (- (+ 5 2) 3)) \\ & = (* 5 (- 7 3)) \\ & = (* 5 4) \\ & = 20 \end{aligned}$$

$$\begin{aligned} & \bullet (- (+ 3 5 4) (* 2 (+ 2 1) 2)) \\ & = (- 12 (* 2 (+ 2 1) 2)) \\ & = (- 12 (* 2 3 2)) \\ & = (- 12 12) \\ & = 0 \end{aligned}$$

2. Below are two expressions written in **postfix notation**. Evaluate them and show the final result.

$$\begin{aligned} & \bullet 7 3 2 * 4 - + \\ & = 7 6 4 - + \\ & = 7 2 + \\ & = 9 \end{aligned}$$

$$\begin{aligned} & \bullet 3 5 4 + + 2 2 1 + 2 * * - \\ & = 3 9 + 2 2 1 + 2 * * - \\ & = 12 2 2 1 + 2 * * - \\ & = 12 2 3 2 * * - \\ & = 12 2 6 * - \\ & = 12 12 - \\ & = 0 \end{aligned}$$