

RPN (Reverse Polish Notation) Worksheet – Answer Key

Problem: Evaluate the following RPN expression $7\ 2\ +\ 3\ 4\ *\ 2\ /\ -$

Answer: 3

Problem: Convert to RPN Convert the algebraic expression $(5 + 3) \times 4 - 6$ to RPN notation.

Answer: $5\ 3\ +\ 4\ *\ 6\ -$

Problem: Convert to algebraic notation Convert the RPN expression $a\ b\ +\ c\ d\ *\ e\ /\ -$ to standard algebraic notation.

Answer: $(a + b) - c * d / e$

Problem: Evaluate the following RPN expression $8\ 3\ 2\ *\ +\ 5\ 4\ -\ 6\ *\ 2\ /\ +$

Answer: 17

Problem: Convert to RPN Convert the algebraic expression $((a + b) \times c - d) / (e + f \times g)$ to RPN notation.

Answer: $a\ b\ +\ c\ *\ d\ -\ e\ f\ g\ *\ +\ /\$

Problem: Convert to algebraic notation Convert the RPN expression $x\ y\ z\ *\ +\ w\ v\ u\ *\ -\ /\ t\ +$ to standard algebraic notation.

Answer: $(x + y * z) / (w - v * u) + t$

Problem: Evaluate the following RPN expression (use degrees for trig functions) $90\ \sin\ 4\ \text{sqrt}\ *\ 16\ 4\ /\ 2\ ^\ +$

Answer: 18

Problem: Convert to RPN Convert the algebraic expression $\sqrt{a^2 + b^2} \cdot \cos \theta$ to RPN notation.

Answer: $a\ 2\ ^\ b\ 2\ ^\ +\ \text{sqrt}\ \theta\ \cos\ *$