1)

A)

Sintaxe	Semântica
PilhaOutput op;	{op} <= topo
PilhaInput op;	topo <= {op}
PilhaInputVar op;	topo <= op
Sum;	topo <= topo + topo-1
Subtract;	topo <= topo - topo-1
Multiply;	topo <= topo * topo-1
Division;	topo <= topo / topo-1
Exponent;	topo <= topo ^ topo-1

$$S = \frac{(C - A^3)}{(B - 5) \times (A + 2)}$$

OBS: {op} indica acesso a memória

B)

Execução	Comentários sobre a execução
PilhaInputVar 2;	2
PilhaInput A;	A
Sum;	A+2
PilhaInputVar 5;	5
PilhaInput B;	B
Subtract;	B-5
Multiply;	(B-5) * (A+2)
PilhaInputVar 3;	3
PilhaInput A;	A
Exponent;	A^3
PilhaInput C;	C
Subtract;	($C-A^3$)
Division;	($C-A^3$) / (B-5) * (A+2)
PilhaOutput S;	S = ($C-A^3$) / (B-5) * (A+2)

2)

A)

Sintaxe	**Semântica**
WOutput op;	{op} <= w
WInput op;	w <= {op}
WInputVar op;	w <= op
Sum op;	w <= w + {op}
Subtract op;	w <= w - {op}
Multiply op;	w <= w * {op}
Division op;	w <= w / {op}
Exponent op;	w <= w ^ {op}
SquareRoot;	w <= √w

$$S = \left| \frac{-B + \sqrt{B^2 - (4 \times A \times C)}}{2 \times A} \right|$$

OBS: {op} indica acesso a memória

B)

Execução	**Comentários sobre a execução**
WInputVar 2;	2
Multiply A;	2 * A
WOutput X;	X = 2 * A
WInputVar 4;	4
Multiply A;	4 * A
Multiply C	4 * A * C
WOutput Y;	Y = 4 * A * C
WInputVar 2;	2
WOutput Z;	Z = 2
WInput B;	B
Exponent Z;	B²
Subtract Y;	B² - (4 * A * C)
SquareRoot;	√B² - (4 * A * C)
WOutput Y;	Y = √B² - (4 * A * C)
WInput B;	B
Sum Y;	B + √B² - (4 * A * C)
WOutput Y;	Y = B + √B² - (4 * A * C)
WInputVar 0;	0
Subtract Y;	0 - B + √B² - (4 * A * C)
Division X;	(- B + √B² - (4 * A * C)) / 2 * A
WOutput S;	S = (- B + √B² - (4 * A * C)) / (2 * A)