Pontifícia Universidade Católica do Paraná
Raciocínio Algorítmico – Lista Teórica 1
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1. Sendo **S = 10**, **A = 10**, **B = 20**, **C = 35**, **D = 15.0** e **E = 3.0**, qual será o valor final de S após a execução de cada uma das expressões?

EXPRESSÃO	**RESPOSTA**
S = A + C × 2 – B / A – (A + B)	48
S = C × 2 + A / B – (B + A)	40.5
S = A + C × 2 – (B / A + A + B)	48
S = A + C × 2 – B / A – (A + B)	48
S = C × 2 + B / A – (A + B)	42
S = C × 2 + A / B – (A + B)	40.5
S = A + C × 2 – B / A – (A + B)	48
S = C × 2 + B / A – (A + B)	42
S = C * 2 + B / A – (A + B) * 2 ** E	-168
S = A + C × 2 – (B / A + A + B)	48
S = A + C × 2 – B / A – (A + B)	48

2. Complete as tabelas abaixo:

AND (**E**)

A	**B**	**S**
V	V	V
V	F	F
F	V	F
F	F	F

OR (**OU**)

A	**B**	**S**
V	V	V
V	F	V
F	V	V
F	F	F

NOT (**NEGAÇÃO**)

A	**S**
V	F
F	V

3. Sendo **A = True**, **B = False** e **C = False**, resolva:

EXPRESSÃO	**RESPOSTA**
S = A **or** B **or** C	True
S = **not** A **and** B **or** C	False
S = **not** (A **and** B) **and** C	False
S = **not** (**not** A **or not** C)	False

4. Sendo **A = 10**, **B = 20** e **C = 30**, resolva:

EXPRESSÃO	**RESPOSTA**
S = A > B	False
S = (B * 2 + A) >= B + C	True
S = A + B != C	False
S = B <= C	True
S = A * 2 == B	True
S = (C – A) / 2 >= B	False
S = (A ** 2) + (B ** 2) > (C ** 2)	False
S = (A + B) * (A - B) != (C ** 2)	True
S = (A * B) + (A * C) >= (B * C)	False
S = (A ** 3) + (B ** 3) == (C ** 3)	False
S = (A ** 2) + (B ** 2) - (C ** 2) >= 0	False
S = (A + B) * (B + C) > (A * C)	True
S = (A ** 2) + (B ** 2) + (C ** 2) != (A * B * C)	True
S = (A * B * C) > (A + B + C)	True
S = (A ** 2) * (B ** 2) != (C ** 4)	True
S = (A * B * C) % 2 == 0	True

5. Informe a precedência:

OPERADOR	**PRIORIDADE**
>, <, <=, >=, ==, !=	2
AND, OR, NOT	3
+, -, /, *, %	1

6. Sendo **A = 10**, **B = 20** e **C = 30**, resolva:

EXPRESSÃO	**RESPOSTA**
S = A < B and A + B > A + C / B	True
S = not (A == B and A >= C) or C == A + B	True
S = not False or A ** 2 / 3 < C - B % 7	True
S = A > B and C < B and not (A == B)	False
S = A > B or C == B or not (A != B)	False
S = A <= B and A + B > C / A	True
S = not (A != B and A < C) and C == A * B	False
S = not True or A ** 2 / 3 < C + B % 7	True
S = A > B or C < B and not (A == B)	False
S = A == B or C != B or not (A > B)	True
S = A > B and A + B > A + C / A	False
S = not (A != B or A < C) and C == A + B	False
S = not True or A ** 2 / 3 < C – B % 7	False
S = A > B and C < B or not (A == B)	True