UF1. Activitats

1. Determina el resultat de les expressions numèriques següents (tal i com es mostra a l'exemple):

a) 3 + 7/3 * 2 - 15 => 3 + 2*2-15 = 3 + 4 - 15 = -8
b) 32%4 + 12 - 4 * 3 => 0 + 12 - 12 = 0
c) 9 - 86/(4 * 3) + 4 => 9 - 86/12 + 4 = 9 - 7 + 4 = 6
d) 42/8 - (3 * 14)+ 6 => 42/8 - 42 + 6 = 5 - 42 + 6 = -31

2. Si els valors de les variables a, b i c són respectivament, fals, fals i cert, determina el valor de les expressions lògiques següents:

a = fals
b = fals
c = cert

a) c AND !a OR b => t AND !f OR f = t AND t OR f = t OR f = True
b) a OR b OR c => f OR f OR t = f OR t = True
c) !(a OR b) AND c => (f OR f) AND t = !f AND t = f AND f = True
d) !a AND !b AND c => t AND t AND t = t AND t = True

3. Si m=5, n=-4, a=false i b=true, determina el valor de les expressions següents, o dir si provoquen alguna mena d'error (en cas que hi hagi):

a) m >= n = 5 > = -4 = True
b) (m < n)!=(a OR b) = (5 < -4) != (f OR t)= f != t = True
c) !(m >= 1/(10 + n)) = !(5 >= (1/(10 + -4)) = !(5 >= ⅙) = !(5 >= 0) = !(t) = False
d) !(m <= 1%(9 + n)) = !(5 <= 1%(5)) = !(5 < = 1) = !f = True
e) m * m < n * n = 25 < 16 = False
f) a OR b < b = f OR f = False
g) !m >=1/(10 + n) = -5 >= ⅙ = -5 >= 0 = False

4. Si x=-3, y=7 i r=0, determina el valor de les expressions següents i el valor final de r:

a) r = x == y => 0 = -3 == 7 = False 0
b) r = x > y => 0 = -3 > 7 = False 0
c) r = x != y => 0 = -3 != 7 = True 1

5. Si p=3, q=12 i r=-1, determina el valor de les expressions següents i el valor final de r:

a) r = (p != 0) AND (q != 0) => -1 = (3!=0) AND (12 != 0) = -1 = (t) AND (t) = -1 = True
b) r = (p != 0) OR (q > 0) => -1 = (3 != 0) OR (12 > 0) = -1 = (t) OR (t) = -1 = True
c) r = (q <p) AND (p <=10) => -1 (12 < 3) AND (3 <= 10) = -1 (f) AND (t) = -1 = False

6. Determina el resultat de les expressions numèriques següents:

a) (2==1) || (-1==-1) => (Fals) OR (True) = True
b) (2==2) && (3==-1) => (True) AND (False) = False
c) ((2==2) && (3==3)) || (4==0) => (True) AND (True) = True
d) ((6==6) || (8==0)) && ((5==5) && (3==2)) => (True) OR (False) AND (True) AND (False) = True OR False AND False = True OR False = True

7. Determina el resultat de les expressions següents:

a) (1 > 0) && (3 == 3) =>cert AND true = TRUE
b) (0 < 5) || (0 > 5) => true OR false = TRUE
c) (5 < = 7) && (2 > 4) => true AND false = FALSE
d) (6 == 1) || (7 > = 4) => false OR true = TRUE