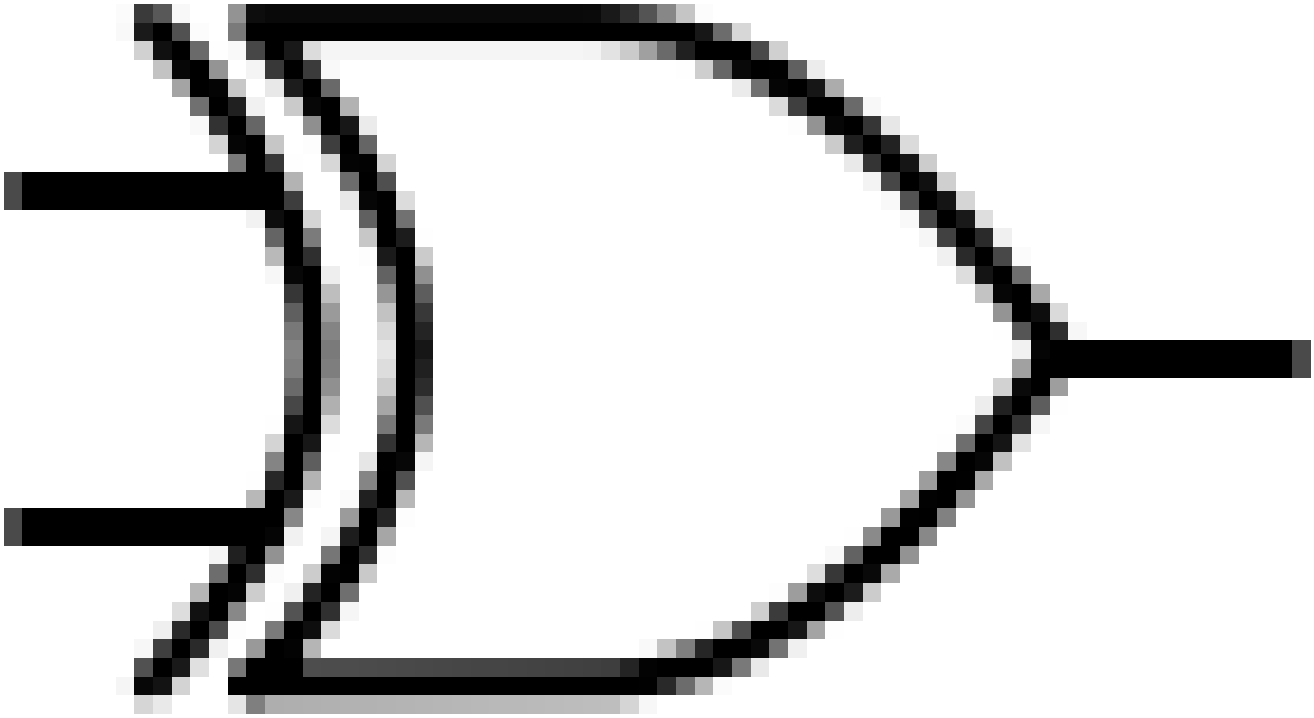
Question 1:

What is the output of the XOR gate with inputs 0, 0?



Options:

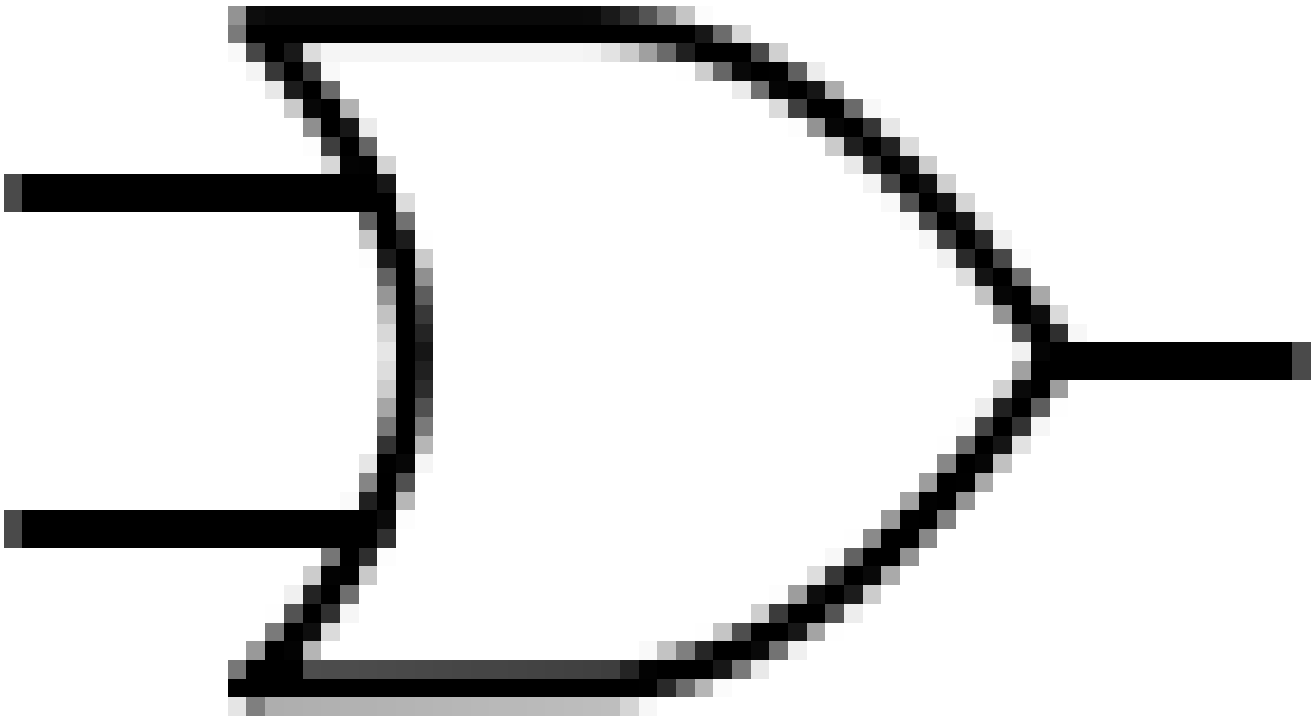
1. 0

2. 1

Correct Answer: 0

Question 2:

What is the output of the OR gate with inputs 1, 0?



Options:

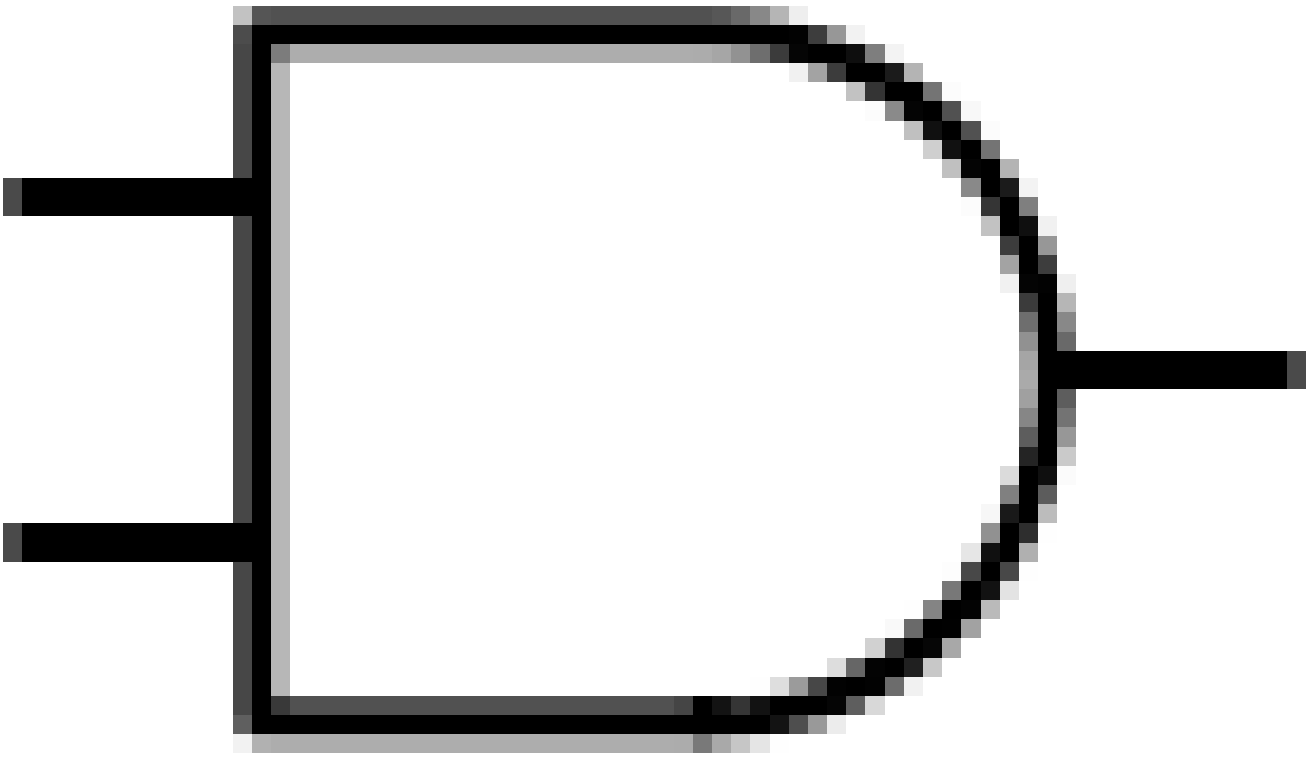
1. 1

2. 0

Correct Answer: 1

Question 3:

What is the output of the AND gate with inputs 0, 0?



Options:

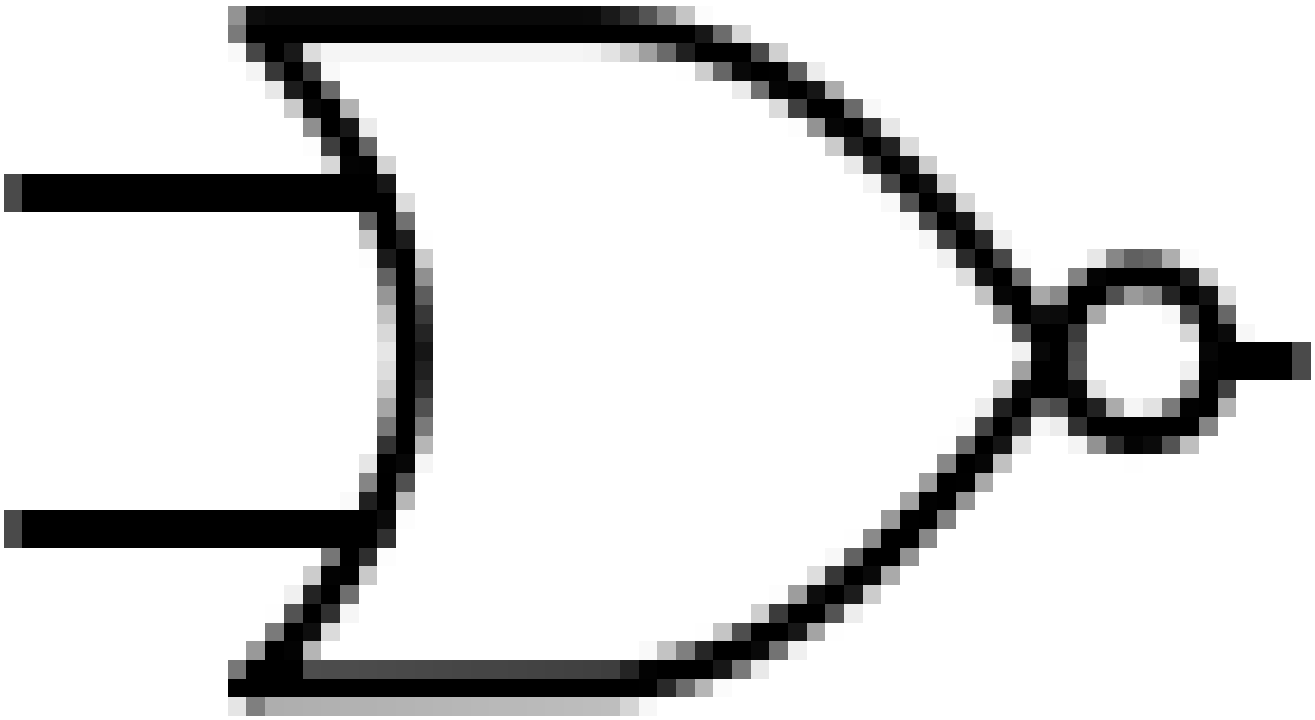
1. 0

2. 1

Correct Answer: 0

Question 4:

What is the output of the NOR gate with inputs 1, 1?



Options:

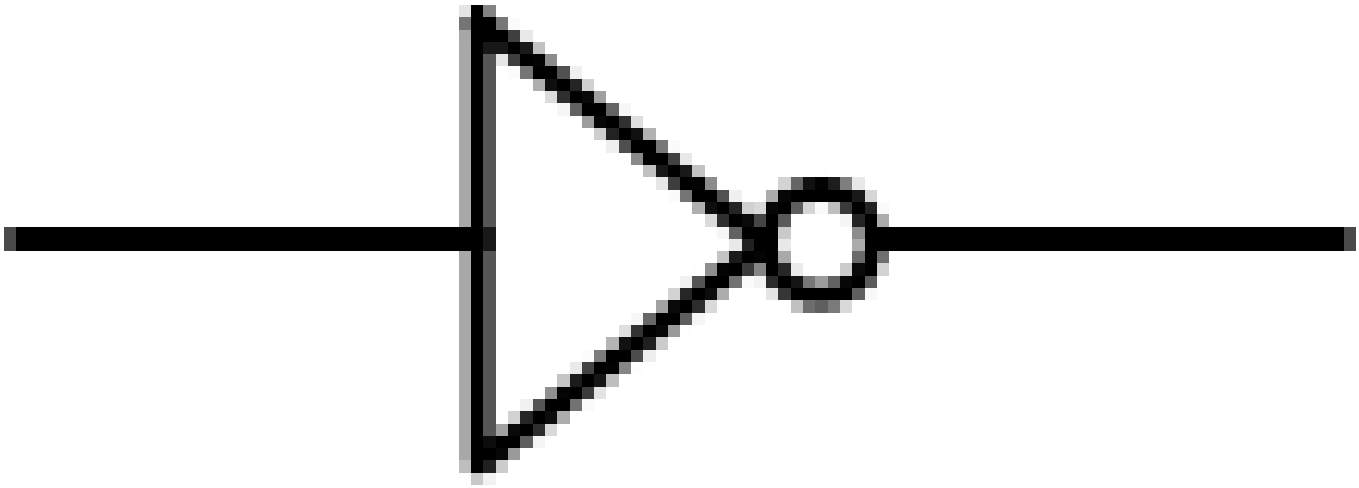
1. 1

2. 0

Correct Answer: 0

Question 5:

What is the output of the NOT gate with input 0?



Options:

1. 1

2. 0

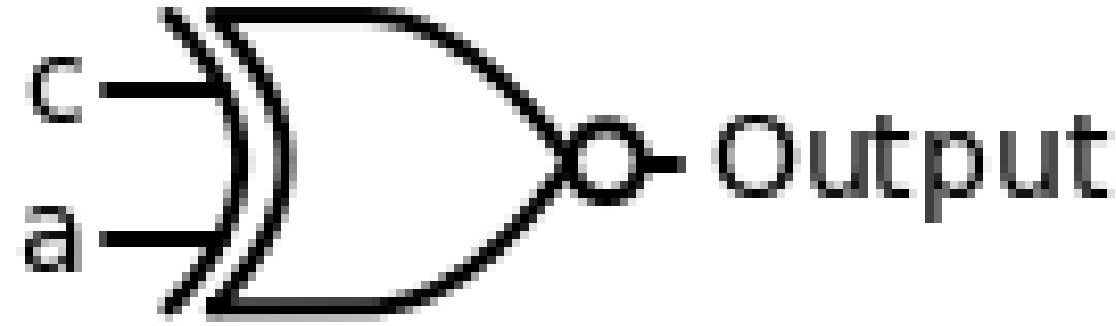
Correct Answer: 1

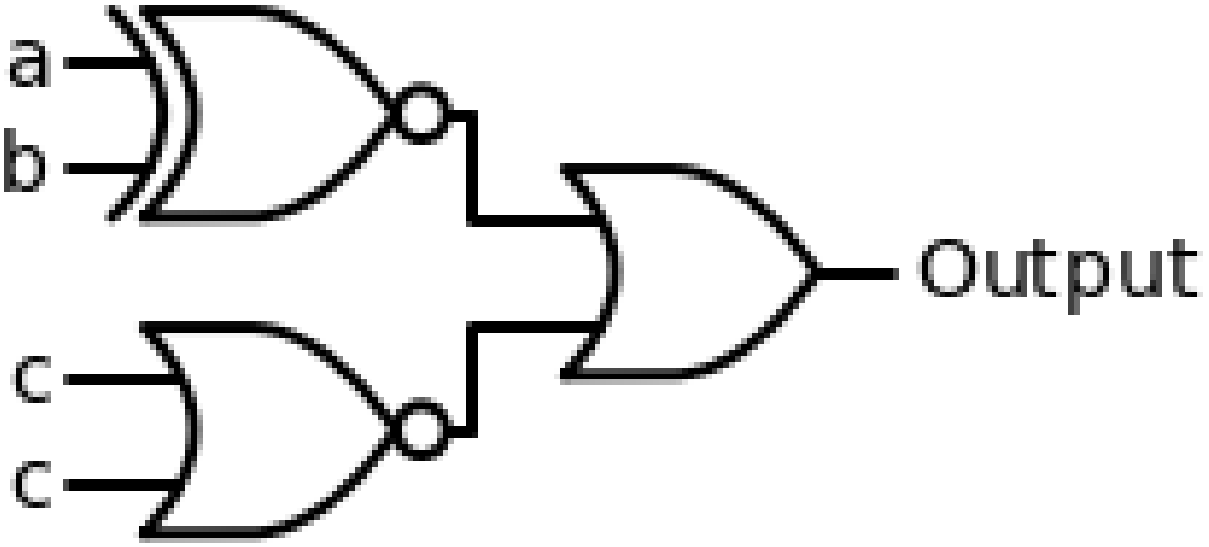
Question 6:

Are these two circuits equivalent?

Expression 1: (c xnor a)

Expression 2: ((not (a xor b)) or (not (c or c)))





Options:

1. Yes

2. No

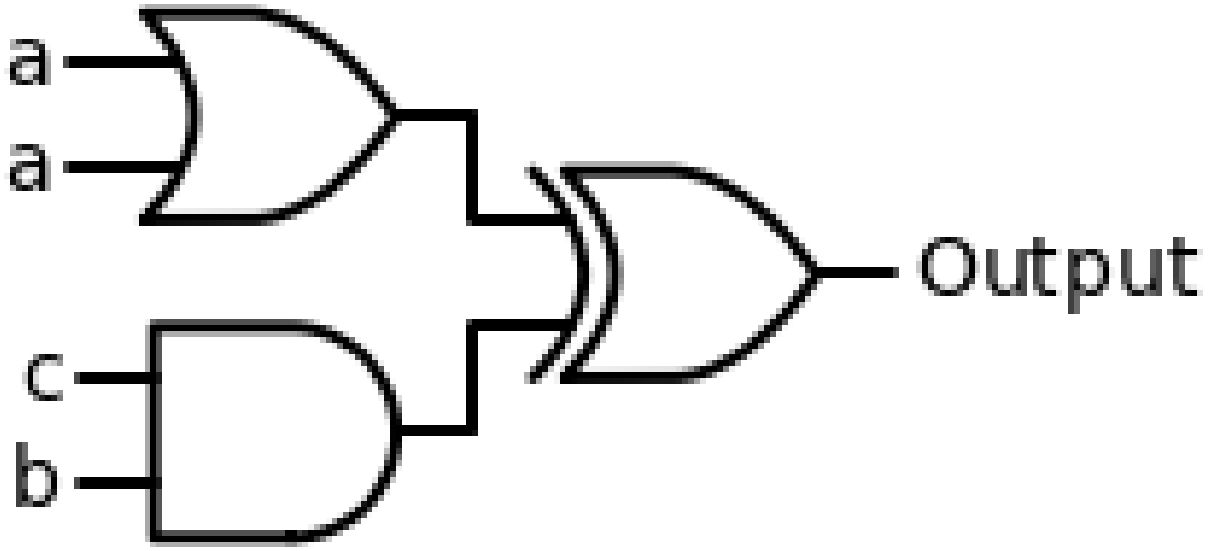
Correct Answer: no

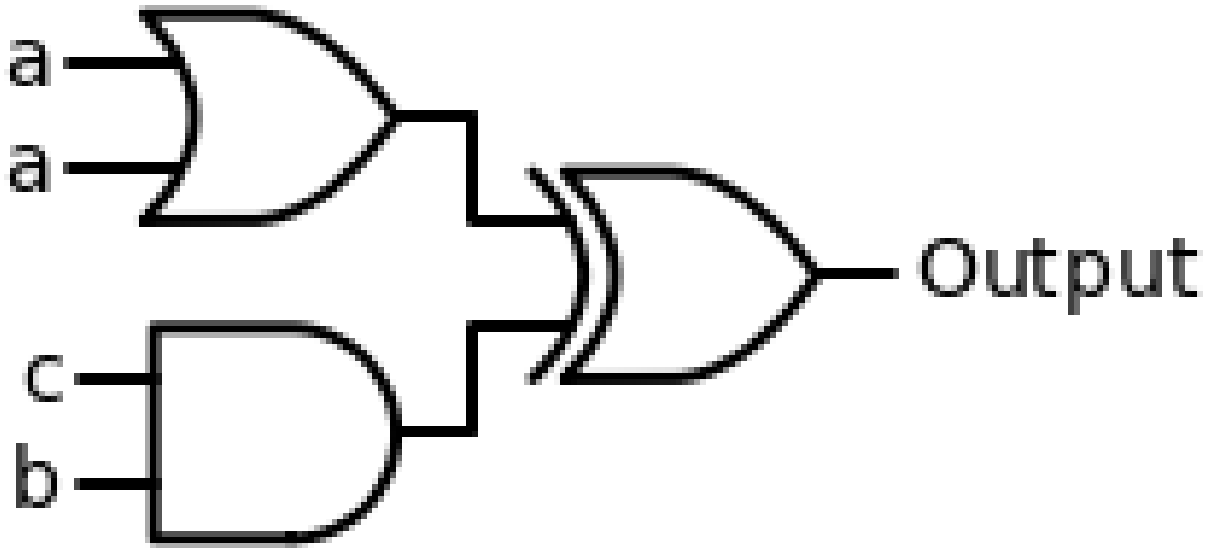
Question 7:

Are these two circuits equivalent?

Expression 1: ((a or a) xor (c and b))

Expression 2: ((a or a) xor (c and b))





Options:

1. Yes

2. No

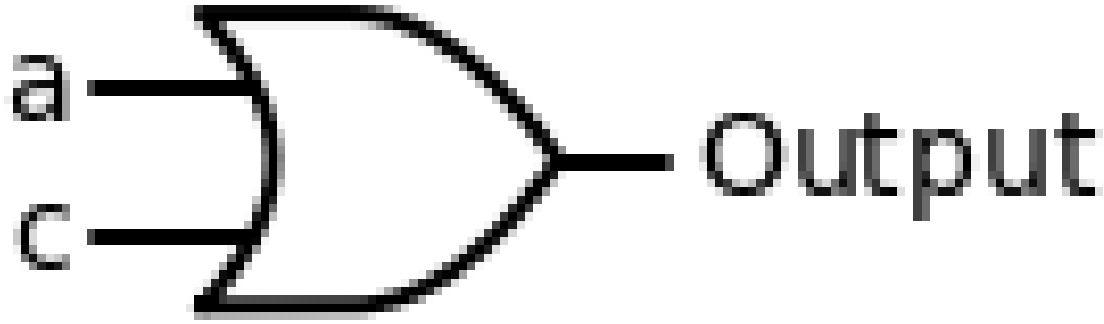
Correct Answer: yes

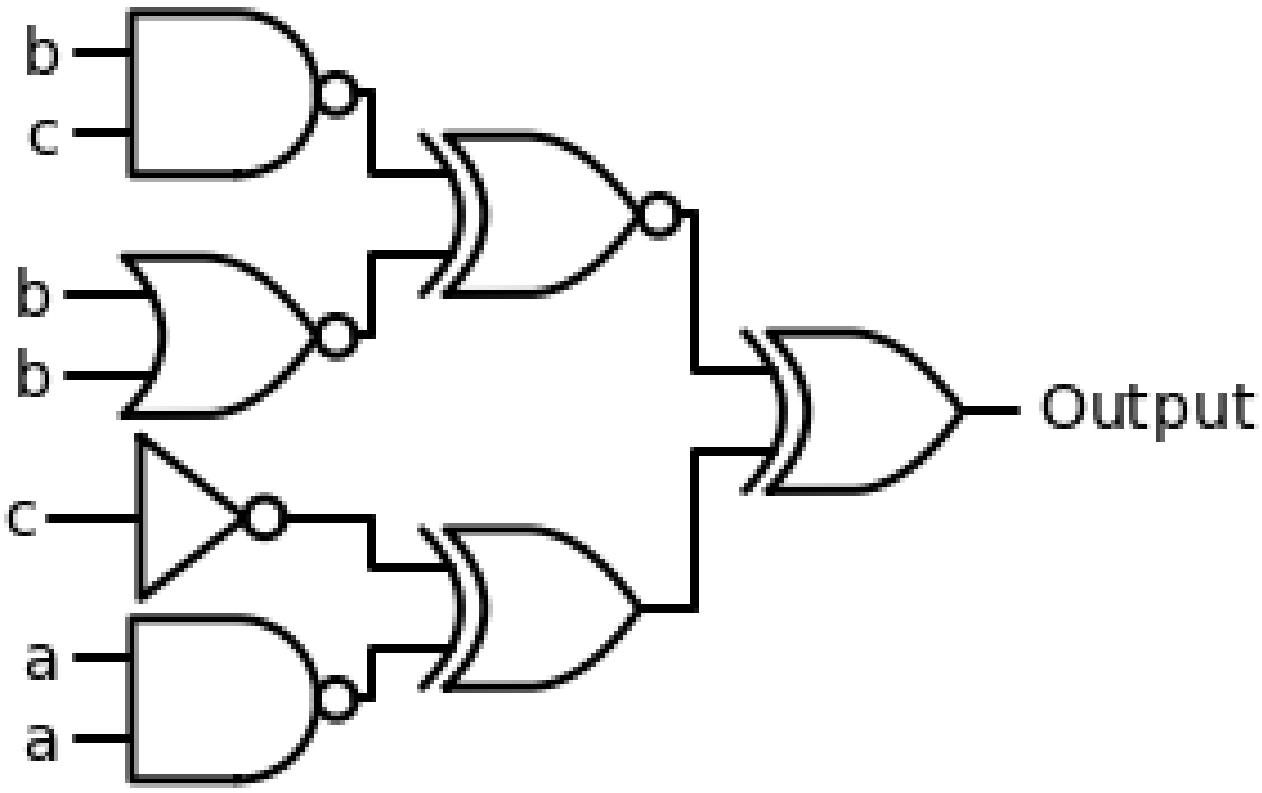
Question 8:

Are these two circuits equivalent?

Expression 1: (a or c)

Expression 2: (((b nand c) xnor (b nor b)) xor ((not c) xor (a nand a)))





Options:

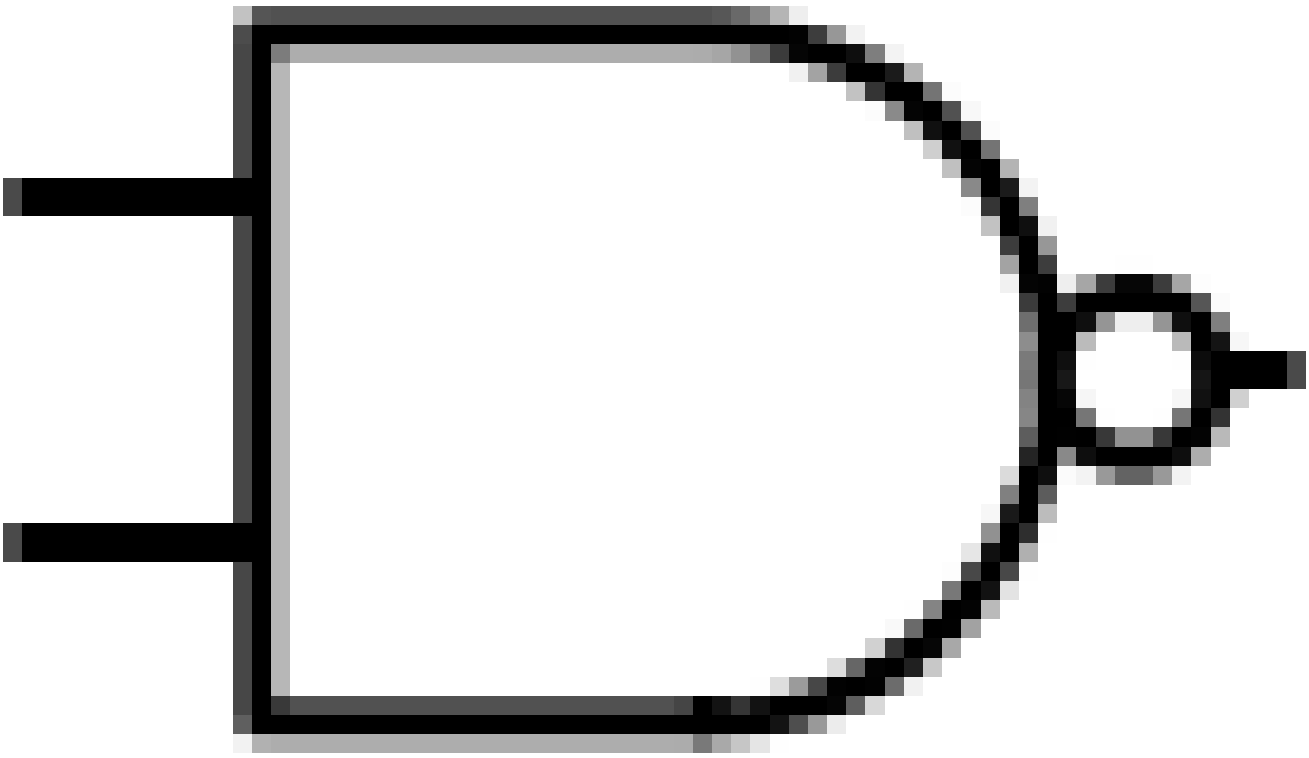
1. Yes

2. No

Correct Answer: no

Question 9:

What is the output of the NAND gate with inputs 0, 0?



Options:

1. 0

2. 1

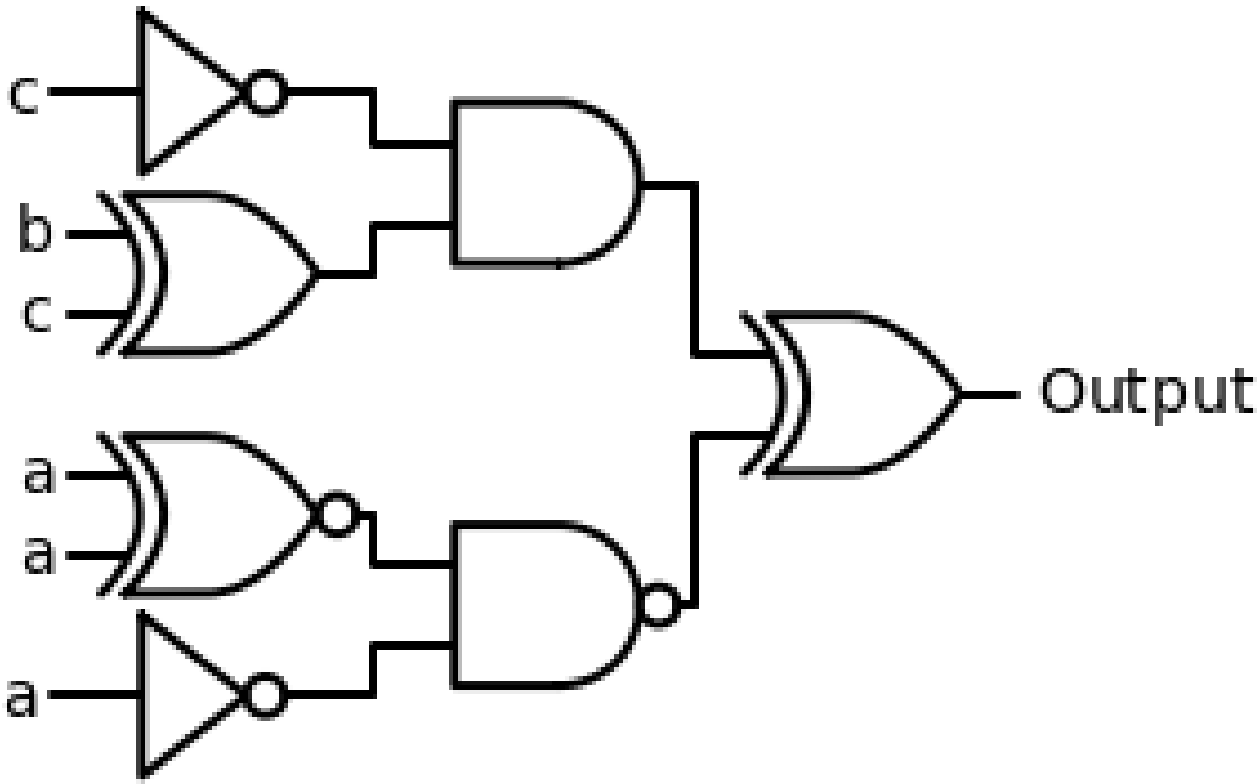
Correct Answer: 1

Question 10:

Are these two circuits equivalent?

Expression 1: (((not c) and (b xor c)) xor ((a xnor a) nand (not a)))

Expression 2: (b nand b)



Options:

1. Yes

2. No

Correct Answer: no