

1: How many numbers can be represented by unsigned, base-4,  $n$ -digit numbers ( $n > 1$ )?

- ☐ (a) 1  
☐ (b)  $2^n$   
☐ (c)  $2^n - 1$   
☐ (d)  $2^{n-1}$   
☐ (e)  $4^n$   
☐ (f)  $4^n - 1$   
☐ (g)  $4^{n-1}$

2: How many different **negative** integers are there among the  $n$ -digit, 2's complement numbers? (0 is neither positive nor negative.)

- ☐ (a) 1  
☐ (b)  $2^{n-1} - 1$   
☐ (c)  $2^{n-1}$   
☐ (d)  $2^n$   
☐ (e)  $2^n - 1$   
☐ (f)  $n$   
☐ (g)  $n^2$   
☐ (h)  $(n - 1)^2$   
☐ (i)  $n^n$

3: How many different **positive** integers are there among the  $n$ -digit, 2's complement numbers? (0 is neither positive nor negative.)

- ☐ (a) 1  
☐ (b)  $2^{n-1} - 1$   
☐ (c)  $2^{n-1}$   
☐ (d)  $2^n$   
☐ (e)  $2^n - 1$   
☐ (f)  $n$   
☐ (g)  $n^2$   
☐ (h)  $(n - 1)^2$   
☐ (i)  $n^n$

4: How many zeros are there among the  $n$ -digit, 2's complement numbers?

- ☐ (a) 1  
☐ (b)  $2^{n-1} - 1$   
☐ (c)  $2^{n-1}$   
☐ (d)  $2^n$   
☐ (e)  $2^n - 1$   
☐ (f)  $n$   
☐ (g)  $n^2$   
☐ (h)  $(n - 1)^2$   
☐ (i)  $n^n$

5: What is the numerical difference between the most positive and most negative number that can be represented by  $n$ -digit, 2's complement numbers?

- ☐ (a) 1  
☐ (b)  $2^{n-1} - 1$

## Homework 1

Assessment  
overview

Total points: 100/100

Score: 100%

## Question

Value: 20

History: 20

Awarded points: 20/20

Report an error in this  
question

Previous question

Next question

## Attached files

No attached files

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- ☐ (c)  $2^{n-1}$
- ☐ (d)  $2^n$
- ☐ (e)  $2^n - 1$
- ☐ (f)  $n$
- ☐ (g)  $n^2$
- ☐ (h)  $(n - 1)^2$
- ☐ (i)  $n^n$

Save & Grade 20 attempts left

Save only

Additional attempts available with new variants ?