

HW1.5. Counting

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

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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 