

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 ?