

Quiz 3

Key

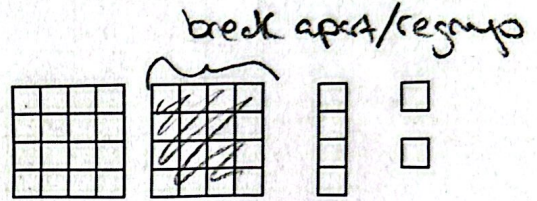
This is a two-stage quiz. During the first stage, use your knowledge & calculator to take this quiz. You have 15 min. In the second stage, you are now welcome to use your books, notes, and students in the class to retake the same quiz. You have 15 min. to write one solution (with everyone's name on it!!!) to be turned in for the group.

Show your work as you would for a *colleague*. Partial credit requires reasonable support.

1. Consider the problem ~~212~~ ~~22~~ ~~22~~

- (a) [1] What base is the subtraction problem using?

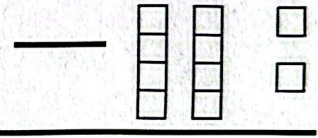
4



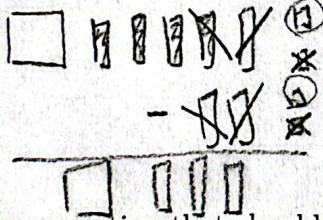
- (b) [2] Write the above subtraction question in positional notation for the given base.

$212_{\text{base 4}} - 22_{\text{base 4}}$

positional notation (+.5)



- (c) [2] Perform the subtraction. Make note of any regrouping.



212 base 4 with one flat broken/regrouped (+.5)
so 130 base 4 or 16 + 12 = 28

- [1] Circle the operation that should be performed first. You do not need to compute the expression.

$36 + (18 \times 40) - 15$

PEMDAS

mult before addition and subtraction

3. [4] The work below is incorrect. Find the errors and explain why/how the error might have happened. You do not need to provide the correct work.

$$\begin{array}{r} 35 \\ \times 2 \\ \hline 610 \end{array}$$

$$\begin{array}{r} 20 \times 51 = 20 \times (50 + 1) \\ = 20 \times 50 = 20 \times 1 \\ = 100 = 20 \\ = 120 \end{array}$$

distribution? the addition sign was turned into an equal sign accidentally? (even though it was turned back to addition at end)

(+1) Placement of the 3 logs was forgotten. Instead of $30 \times 2 = 60$ it was $30 \times 2 = 600$ (probably b/c the 1 was in the spot already)