## Quiz 1

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. [3] Ryan is building a toothpick sequence as shown below. Which figure did he use 15 toothpicks in? Make sure to provide a bit of reasoning/justification for your answer.
$\frac{1}{\text{Figure: 1}} \frac{1}{2} \frac{1}{3} \frac{1}{4} \frac{1}{5} \frac{5}{6} \frac{7}{7}$
Tahpole : 3 5 7 9 11/13/15
Simply 100% 1100 we add 2 tompers for each new figure 7
This Continuing the pattern/texte was see the the hours has 15 touthout
2. Two circular cardboard disks each have a one digit number written on the front and back sides. The front of the numbers are shown here.
By tossing both disks and
adding the numbers that show
adding the numbers that show face up, we can obtain the totals: 12, 13, and 14.
(a) [3] Could the back of the red 6 disk
have a 9 on it? Justify your answer briefly.
9 m
CPS De possible hip could have been 9.
(Mes) (1) of possible hip could have been (9) ().
( Note 9+7=16 which is not an opher of the totals?
(b) [4] What kind of strategy (eg. drawing, table, guessing & checking, models, work backwards, etc) might you use to try to solve this problem? Briefly start so the
strategy can be easily seen. (Note, the answer does not need to be found, just
the set up for the strategy work!)
relative things The of oxidation do say with the below 9.
The of pasion with 25 relace to
the set up for the strategy work!)  see how succeeded from (a) we see that 9 is too big. We can build a redestrol thing the possibilities of Stay with #'s below 9.  Ex (3) Front the bluts can only be 12,13,14 (Ex (5) (8))  buck (6+7 = 13
6+4 = 13 (3) (4) Works = 17.
POSSING 15/15, 317=10 IS NOTA SHAW? 16/8=14 5/8=