Quiz 8

This is a two-stage quiz. During the first stage, you can use your knowledge & calculator. 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. Groups must be 2 or 3 people.

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

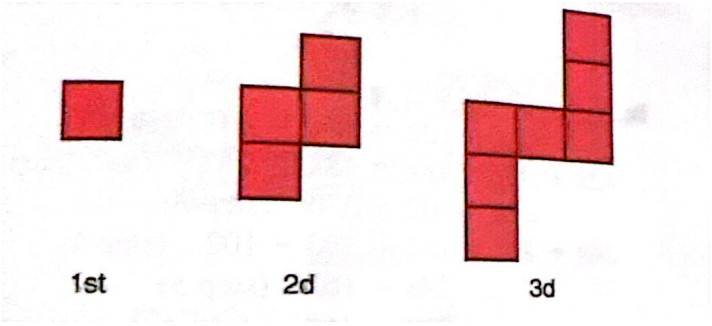
1. [3] The following work maybe correct or incorrect. If correct, briefly describe why. If incorrect, find the error(s) and try to detect the reason for the error:

$$\begin{aligned}
\frac{2}{x}+\frac{2}{5} &= \frac{3}{4}; \text{ flip both sides over} \\
\frac{x}{2}+\frac{5}{2} &= \frac{4}{3}; \text{ add the fractions on the right} \\
\frac{x+5}{2} &= \frac{4}{3}; \text{ multiply both sides by 2} \\
x+5 &= \frac{8}{3}; \text{ subtract 5 from both sides} \\
x &= \frac{8}{3}-5 = \frac{8}{3}-\frac{15}{3} = \frac{-7}{3}
\end{aligned}$$

2. Consider the sequence that begins with the first three figures shown:

   (a) [2] How many tiles are there in the 10th figure?

   (b) [3] Let n be the figure number. Describe the number of tiles in the nth figure in terms of n.



   (c) [2] Which figure will have 8320 files?