MG 5860: Visual Group Theory (Summer 2009)
Quiz 9 (20 points)

NAME:

Instructions: Answer each of the following questions completely. If something is unclear, or if you have any questions, then please ask. Good luck!

1. (8 points) Draw a Cayley diagram for the direct product $C_5 \times C_3$ and label the nodes with the appropriate ordered pairs.

2. (3 points each) Consider the direct product $D_5 \times C_8$. Answer each of the following questions about this group.

    (a) How many elements are in this group?

    (b) What is the identity in this group?

    (c) If $*$ represents the binary operation in this group, determine $(fr^3, 6) * (fr, 5)$.

    (d) What is the inverse of $(r, 6)$?