Problem of the Week

Problem A

Wardrobe Malfunction

Rashid has decided to make clothing decisions easy for himself in the morning. He has kept 3 shirts, 2 pairs of pants, and 2 pairs of socks. They are as follows:

Shirts:
- light blue
- dark blue
- burgundy

Pants:
- blue jeans
- burgundy pants

Socks:
- blue
- red

Note that Rashid always wears two socks that are the same colour.

A) How many possible different outfits could Rashid wear?

B) How many of the outfits from part A contain all blue items?

C) What fraction of the total possible outfits contain all blue items?

D) What fraction of the total possible outfits contain at least one burgundy item?