Day 8

Favorite group so far

Turn to someone sitting near you. Take about 3 minutes to discuss:

If you *have* to pick, what would you say is your favorite group that you've encountered so far? Why do you like it? Is it abelian? What is its order? Do you have a favorite subgroup of your favorite group?

Subgroups

1. Consider the subset $H = \{2^a \mid a \in \mathbb{Z}\}$ of $\mathbb{R}^*$.

(A) H is a subgroup of G.

(B) H is not a subgroup of G.

2. Consider the subset $H = \{A \in \mathrm{GL}(2, \mathbb{R}) \mid \det(A) = 2\}$ of $\mathrm{GL}(2, \mathbb{R})$.

(A) H is a subgroup of G.

(B) H is not a subgroup of G.

3. "Suppose H is a subgroup of D_3 that contains two distinct reflections. Then $H = D_3$."

This statement is...

(A) True.

(B) False.