Diffusion in Gels Questions

What is the molecular weight of barium chloride?

What is the molecular weight of hydrogen sulfate?

Which compound should diffuse faster?

State this as a hypothesis to be tested.

Distance traveled by barium chloride.

Distance traveled by hydrogen sulfate

What is the ratio of these distances? Make sure to say which side of the ratio is BaCl₂ and which side is H₂SO₄. Keep the sides of the ratio in the same order e.g. if you list BaCl₂ on the left side of the ratio keep it on the left side for the following two questions.

What is the ratio of the molecular weights? Make sure to say which side of the ratio is BaCl₂ and which side is H₂SO₄.

What is the ratio of the square roots of the molecular weights? Make sure to say which side of the ratio is BaCl₂ and which side is H₂SO₄

Note: Your ratios should use the least common denominator e.g. if your distances traveled were hypothetically BaCl₂ 0.8cm and H₂SO₄ 0.2cm then don’t write your ratio as 0.8 to 0.2 but as 4 to 1. Similarly if you were comparing the molecular weights and they were hypothetically BaCl₂ 484 and H₂SO₄ 880 write 1 to 1.8 not 484 to 880.
Is diffusion rate directly or inversely proportional to the molecular weight or the square root of the molecular weight?

Do you accept or reject your hypothesis?