

Chapter 3: Meaning

1. The chapter claims that mathematical ideas are metaphors. What's a mathematical idea you've seen in more than one situation? How has the meaning of that idea become clearer and richer by seeing it in different situations?
2. Give an example from your own experience of how abstraction can enrich the meaning of an idea, mathematical or otherwise.
3. "Mathematics is the art of engaging the meaning of patterns." Give an example from your own mathematical experience where this was true.
4. Choose a quotation from the chapter that stood out to you, and explain what about it struck you.

Chapter 4: Play

1. Think of an activity outside of mathematics that you associate with play, and make a list of all the things you enjoy about the playfulness of that activity. What analogies can you see between the things on your list and mathematical activities?
2. Math play "asks you to change perspective, to look at a problem from different viewpoints." Describe at least one instance in which you've had to change perspective in a mathematical situation and one instance in which you've had to change perspective in a non-mathematical situation.
3. In what ways is the virtue of changing perspective useful in life?
4. What role does play have in the life of a follower of Jesus?

Chapter 5: Beauty

1. What's an experience you've had with mathematical beauty? Would you classify it as sensory, wondrous, insightful, or transcendent beauty? How did that experience make you feel?
2. In what disciplines/subjects have you seen the human desire for beauty acknowledged, either implicitly or explicitly? Give some examples.
3. In what ways is an appreciation of mathematical beauty similar to an appreciation of beauty in Christian faith? In what ways does it seem different to you?