**Classroom Connection Activities**

Please engage in the following activities and bring resulting responses or materials with you to our next session. Feel free to engage with colleagues in these activities, however it will be helpful for each participant to bring or upload responses and materials for the next session.

1. Read the Math Notes document on “Equivalence” to gain a more in-depth sense of the mathematical idea. Then, look in your school’s curriculum materials to identify instances where students encounter equivalence. Many of these instances will not be explicitly labeled as instances of “equivalence”.
2. Early in this session Dr. Ball described a special kind of knowledge needed by teachers of mathematics. Read the article “Knowing Mathematics for Teaching” by Dr. Ball and her colleagues (2005) to gain a more in-depth sense of this knowledge. *The information about this reading can be found in the Professional Readings list, that can be accessed by facilitators in the Session 1 Planner.* As you read the article, consider the following questions:
	1. What is mathematical knowledge for teaching? What are its elements? Which, if any, elements shared in the article were surprising to you?
	2. How is mathematical knowledge for teaching different from general mathematical knowledge?
	3. How does the article illustrate the importance mathematical knowledge for teaching?
	4. On Page 17 in the section *What Does It Mean to Know Mathematics for Teaching?* a series of mathematical questions are presented that teachers need to be prepared to address in their teaching. As you considered these questions, are there other mathematical examples that you know as a teacher that non-teachers do not know? If so, describe that mathematics.