Getting Ready to Read: Extending Vocabulary – Concept Circles

MATHEMATICS Grades 10 - 12

A Concept Circle is an organizer that is divided into sections for holding words or symbols that are related.

Purpose

- Create a visual connection between concepts and vocabulary.

Payoff

Students will:

- develop an understanding of key concepts and vocabulary.
- draw on prior knowledge to make connections among concepts and vocabulary.

Tips and Resources

- Draw from the classroom word wall. See Extending Vocabulary – **Creating a word wall.**
- Develop organizers using different strategies such as a **Graffiti strategy**.
- Use organizers for words that have multiple meanings depending on contexts (e.g., rational, root, similar and radical).
- Use organizers to help the understanding of symbols as well as words (e.g., π , $\in$,$\geq$).
- See Student/Teacher Resources: *Concept Circles – Samples.*
- See Student/Teacher Resource: *Concept Circles – Templates.*

Further Support

- Encourage students to use the organizers as references.
- Consider allowing students to use organizers during assessments.

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What teachers do	What students do
Before • Identify key concepts and vocabulary that students will need. • Ask students to generate a list of key words and concepts. • Reduce the list to essential concepts that are critical to the unit of study. • Model the creation of a concept circle by placing 3 to 6 words into a concept circle. Ask for student input to suggest possible titles for each circle.	• Check their notes for underlined vocabulary words and key concepts. • Work in small groups or alone to identify relationships among the concepts. • Ask questions to clarify understanding.
During • Choose an Oral Communication strategy such as Think/Pair/Share. • Direct students to determine the relationship among the words/symbols. • Have them create concept circles using the relationships found. • Have students share their concept circles with other groups.	• Make the concept circles. • Discuss the meaning of the words, seeking help from the teacher if necessary. • Contribute to group discussions.
After • Ask students for other words or symbols that could go on their concept circles if they were given more parts to the circle. • Decide the best way to have the concept circles stored for future reference and study (e.g., putting them on a bulletin board, keeping them in the students' books, or taping them to the wall).	• Generate other words or symbols that could have been used in the concept circle.

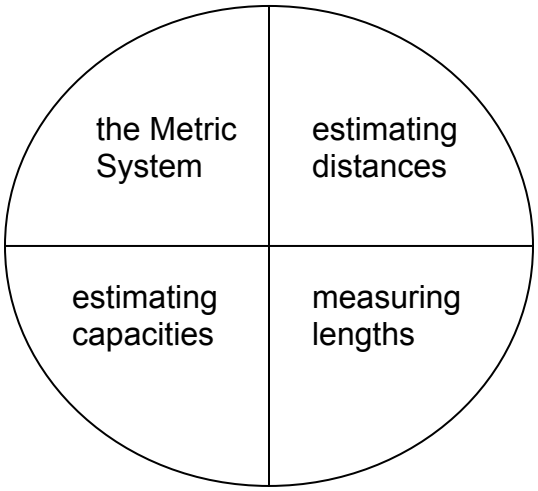
Notes

Getting Ready to Read: Extending Vocabulary – Concept Circles – Samples

MATHEMATICS Grade 12 Workplace

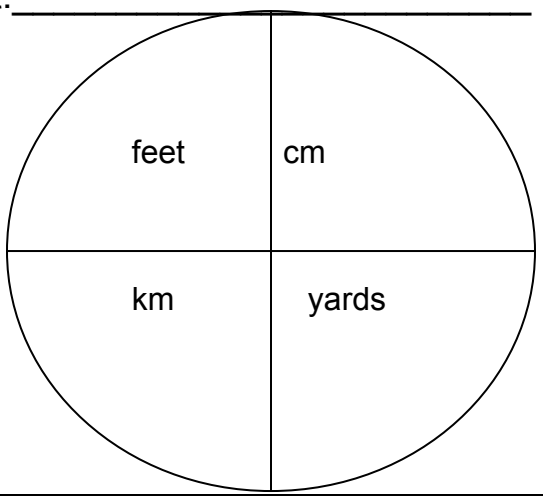
Sample Concept Circle

Concept: _____



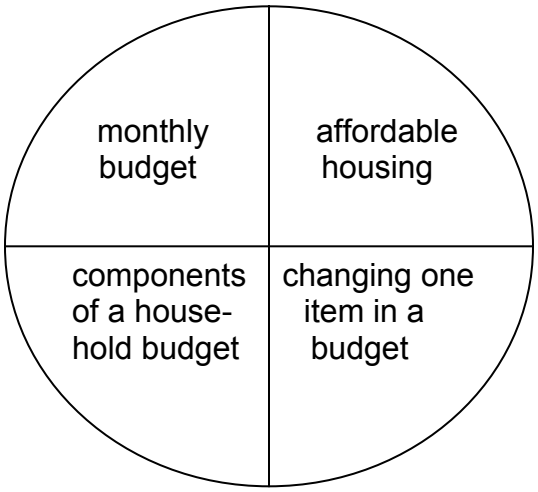
Sample Concept Circle

Concept: _____



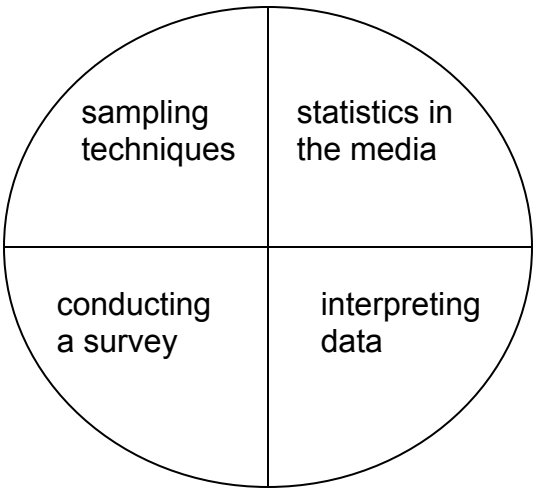
Sample Concept Circle

Concept: _____



Sample Concept Circle

Concept: _____



Possible Answers: Measuring and Estimating, Metric and Imperial Measurements, Household Budgets, Collecting and Organizing Data.

Student/Teacher Resource

Getting Ready to Read: Extending Vocabulary – Concept Circles – Samples

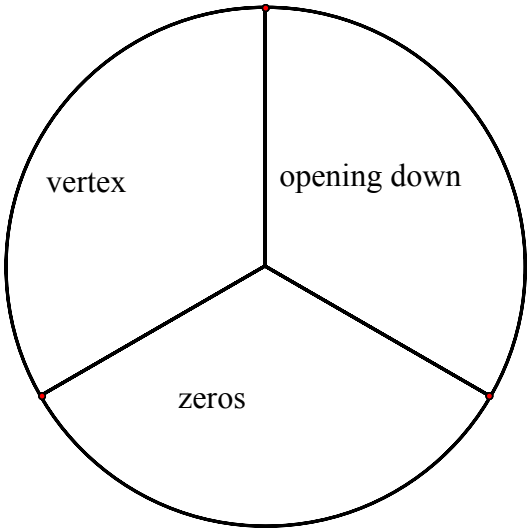
MATHEMATICS (MPM 2D, MBF 3C, MCB 4U)

Concept Circles – Samples (MPM 2D, MBF 3C, MCB 4U)

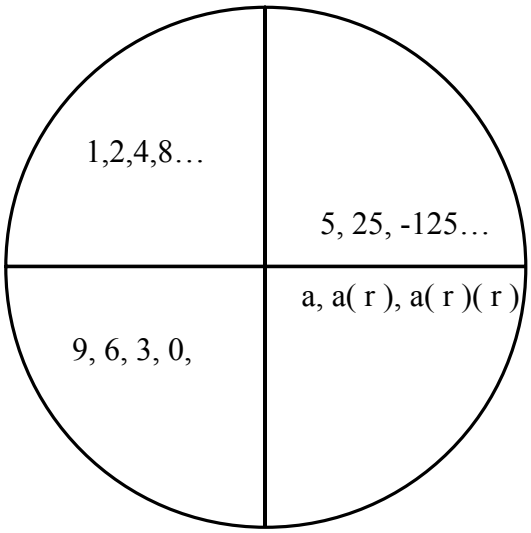
1. Put related concepts (e.g., units, shapes, words, phrases, symbols) into each section. Then direct students to identify the relationship among the contents of the sections and write in the title.
2. Modify the strategy by:
   a. leaving one section empty to be filled by students.
   b. including one non-example and asking students to find which item does not belong, and justify their answer.

Example of 2b

Concept 1: _____



Concept 2: _____



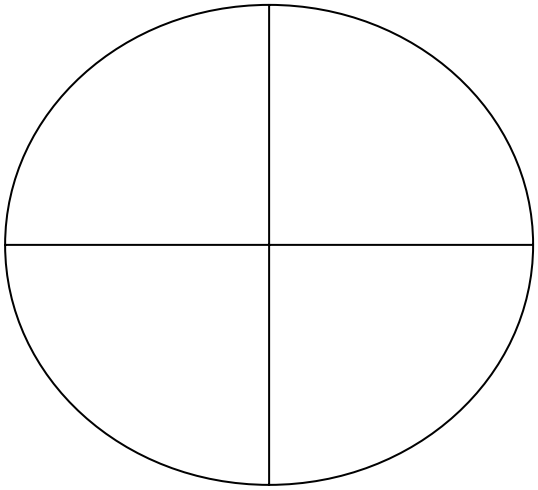
Possible Answers:

Characteristics of some Quadratic Function

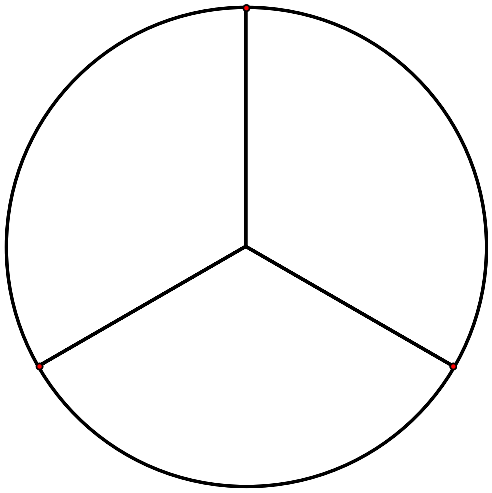
The bottom left quadrant is not a geometric sequence

Getting Ready to Read: Extending Vocabulary – Concept Circles – Templates

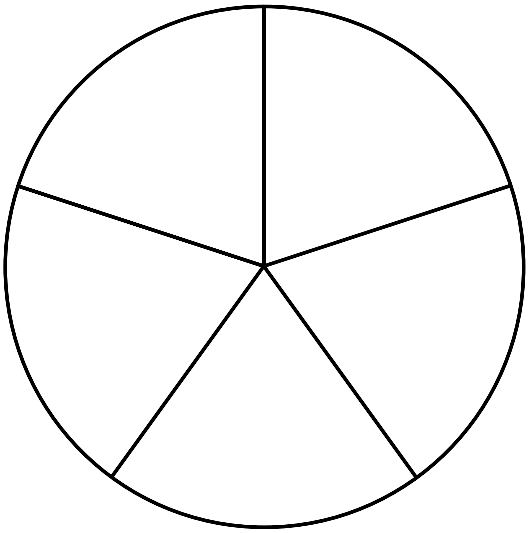
Sample Concept Circle
Concept:
_____



Sample Concept Circle
Concept:
_____



Sample Concept Circle
Concept:
_____



Sample Concept Circle
Concept:
_____

