

Name _____

Date _____

Domain-specific Words

Definition

Domain-specific words are specialized terms that have precise meanings within particular fields, subjects, or areas of study. These words are often technical vocabulary that may not be commonly used in everyday language but are essential for communication within specific disciplines.

PART 1: Matching Domain-specific Words

Match each domain-specific word from ancient Egyptian mathematics to its correct definition.

- ____ Seked
- ____ Hekat
- ____ Remen
- ____ Cubit
- ____ Oipe

- a. The standard unit of volume in ancient Egypt, used for measuring grain
- b. A measurement used to determine the slope of a pyramid
- c. The most common unit of length in ancient Egypt, approximately 52.5 cm
- d. A unit of area measurement used in land surveying
- e. A unit of volume equal to four hekat

PART 2: Multiple Choice - Using Domain-specific Words

Choose the best answer for each question about domain-specific words related to ancient Egyptian mathematics.

Name _____

Date _____

Domain-specific Words

1. Which domain-specific term describes the ancient Egyptian system of writing numbers?

- a) Hieratic notation
- b) Cuneiform
- c) Papyri numerals
- d) Roman numerals

2. The ancient Egyptian method for calculating the area of a circle used what domain-specific mathematical concept?

- a) Pi approximation
- b) Quadratic equations
- c) Pythagorean triples
- d) Decimal fractions

3. Which domain-specific term describes the ancient Egyptian practice of using knotted ropes to create right angles for construction?

- a) Triangulation
- b) Rope stretching
- c) Angular bisection
- d) Plumb lining

4. What domain-specific term describes the Egyptian method of multiplication that uses doubling?

- a) Multiplicative progression
- b) Fractional division
- c) Duplication method
- d) Geometric series

Name _____

Date _____

Domain-specific Words

PART 3: Fill in the Blank

Complete each sentence with the appropriate domain-specific word from ancient Egyptian mathematics and geometry.

1. Ancient Egyptian mathematicians expressed fractions as sums of unit fractions, which are now called _____ fractions in modern mathematics.
2. The _____ was a geometric formula used by ancient Egyptians to find the volume of truncated pyramids.
3. The ancient Egyptians used a mathematical constant approximately equal to 3.16 for calculating circles, which was their estimation of what we now call _____.
4. The ancient Egyptian _____ system was based on powers of 10 but did not use place value like our modern number system.
5. The _____ was an ancient Egyptian mathematical tool with movable markers used for calculation, similar to an abacus.

Name _____

Date _____

Domain-specific Words

PART 4: Identify the Domain

Indicate whether each term belongs primarily to the domain of A) Measurement, B) Calculation Methods, C) Geometry, or D) Mathematical Tools.

1. ____ Palette (writing surface for mathematical problems)
2. ____ Seqed (slope calculation)
3. ____ Ro (small unit of volume, $1/320$ of a hekat)
4. ____ Reed squares (used for area measurement)
5. ____ Doubling method (multiplication technique)

PART 5: Context Clues

Read each sentence and use context clues to determine the meaning of the underlined domain-specific word related to ancient Egyptian mathematics.

1. The ancient Egyptian scribes used the unit fraction system, where every fraction was written as a sum of fractions with numerator 1, to solve complex division problems.

This suggests that unit fractions are:

2. When Egyptian architects designed pyramids, they needed to calculate the correct seked to ensure the structure had the proper slope from base to apex.

This suggests that seked is:

Name _____

Date _____

Domain-specific Words

3. Egyptian surveyors used nilometers to predict annual harvests by measuring the height of the Nile's flood waters.

This suggests that nilometers are:

4. The scribe recorded all mathematical calculations in hieratic notation, a simplified form of hieroglyphics used for everyday writing.

This suggests that hieratic is:

5. After the flood waters receded, surveyors used rope stretching techniques with knotted cords to reestablish property boundaries.

This suggests that rope stretching is:

Name _____

Date _____

Domain-specific Words – Answer Key

PART 1: Matching Domain-specific Words

1. b - Seked (slope measurement)
2. a - Hekat (unit of volume)
3. d - Remen (unit of area)
4. c - Cubit (unit of length)
5. e - Oipe (larger unit of volume)

PART 2: Multiple Choice - Using Domain-specific Words

1. a) Hieratic notation
2. a) Pi approximation
3. b) Rope stretching
4. c) Duplication method
5. b) Rhind Papyrus

PART 3: Fill in the Blank

1. Egyptian fractions or unit
2. Frustum formula
3. pi
4. numeral or hieroglyphic
5. counting board

PART 4: Identify the Domain

1. D) Mathematical Tools
2. C) Geometry
3. A) Measurement
4. A) Measurement
5. B) Calculation Methods

Name _____

Date _____

Domain-specific Words – Answer Key

PART 5: Context Clues

1. fractions with a numerator of 1 (like $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$)
2. a measurement or calculation used to determine pyramid slope
3. devices or tools used to measure water levels of the Nile River
4. a writing system or script used for mathematical notation
5. a surveying or measuring technique using ropes with knots