Math Now.
Why and How.

Grade 3 Math Morning

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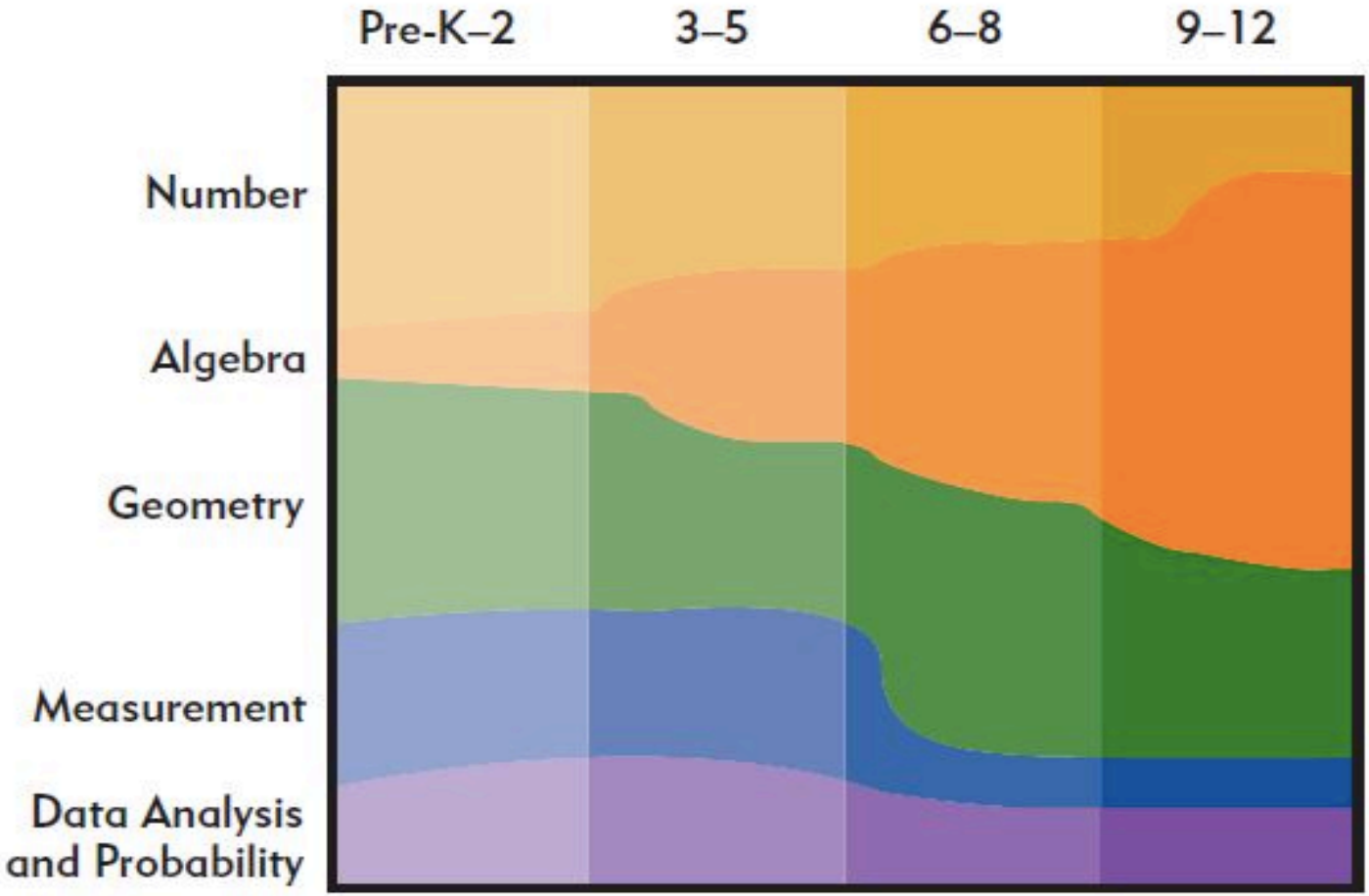
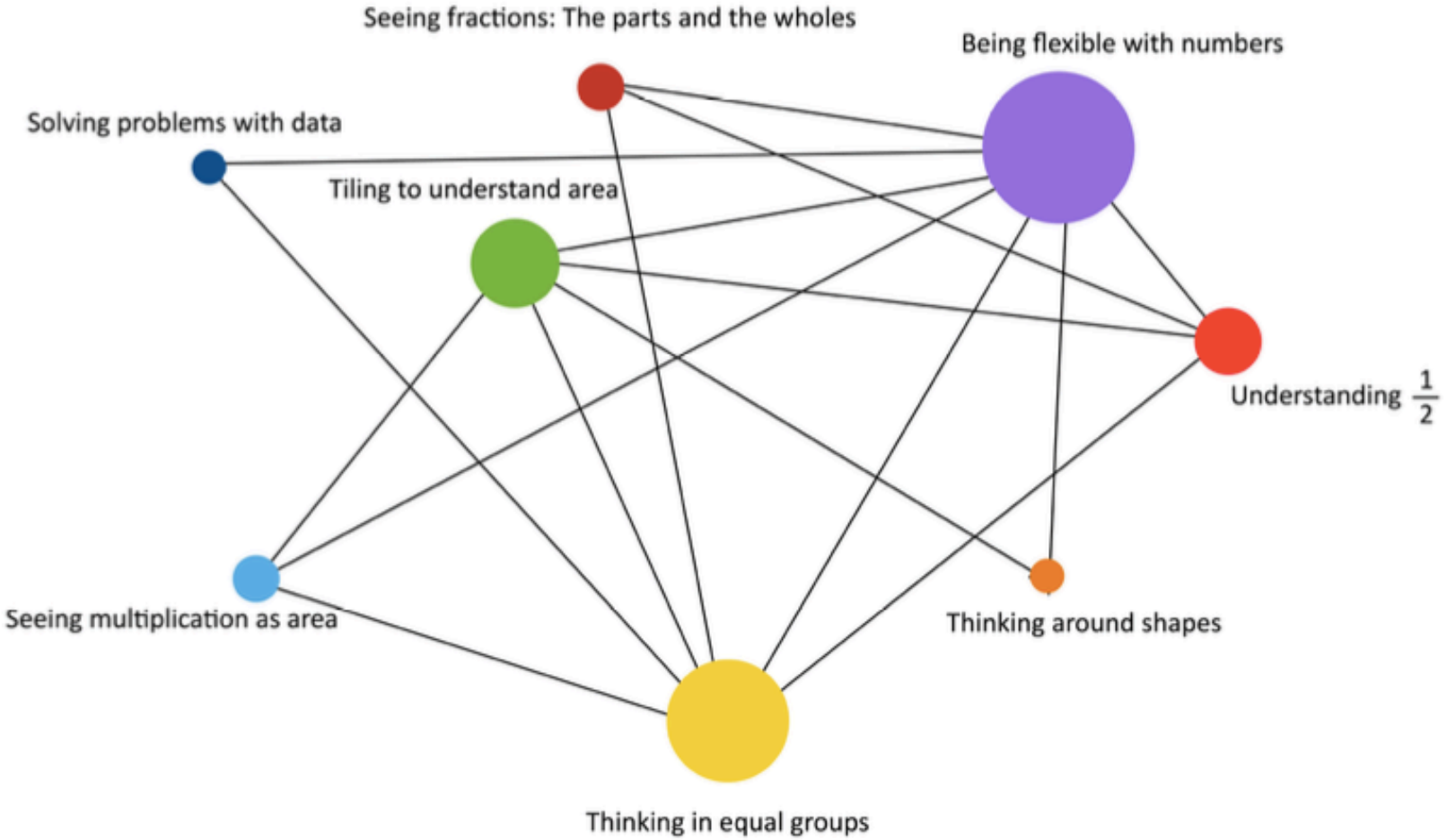
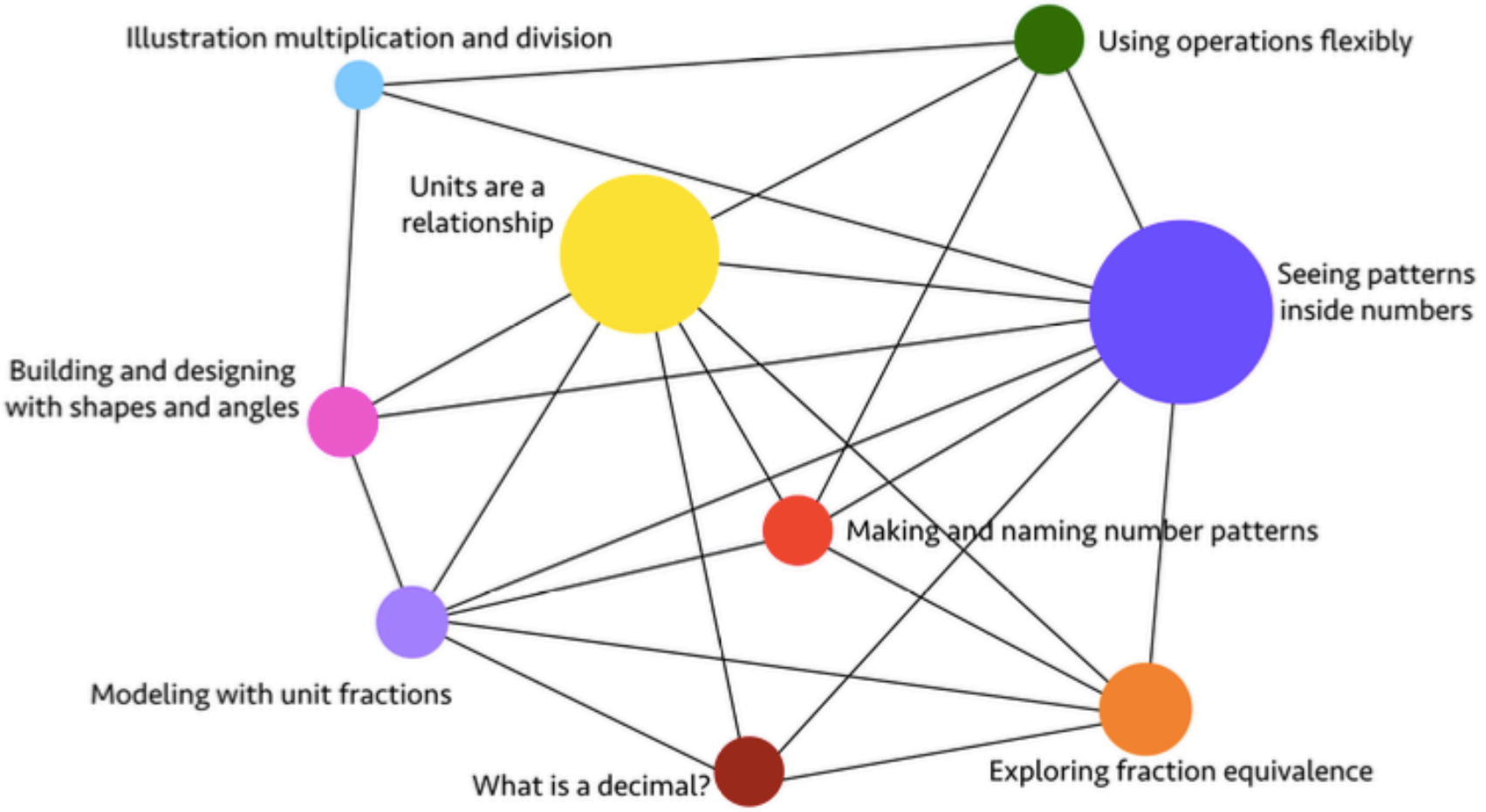
Proportion of Instruction of Math Content Standards



Big Ideas of Grade 3

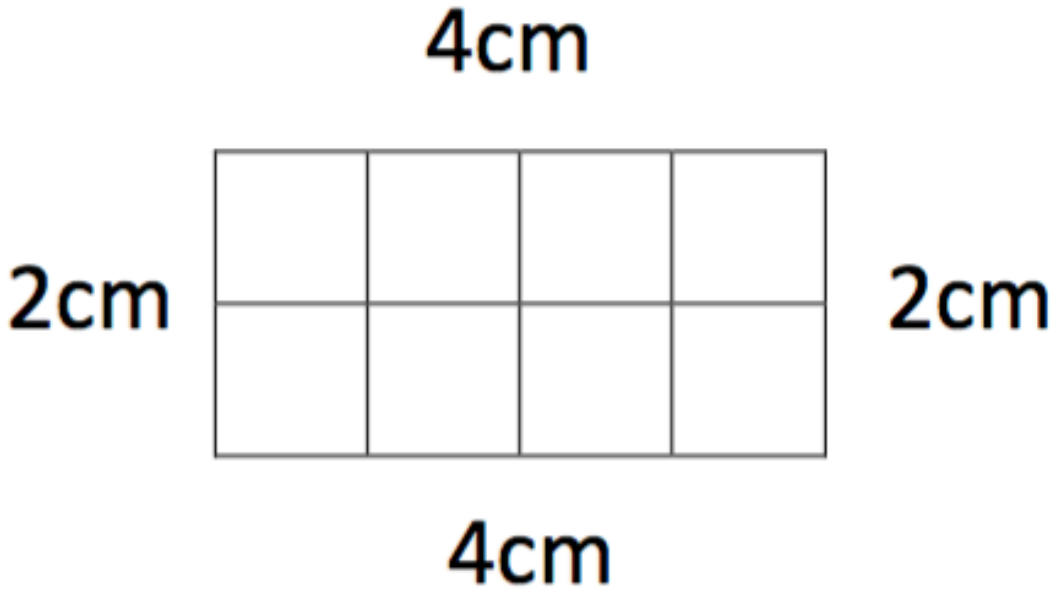


Big Ideas of Grade 4



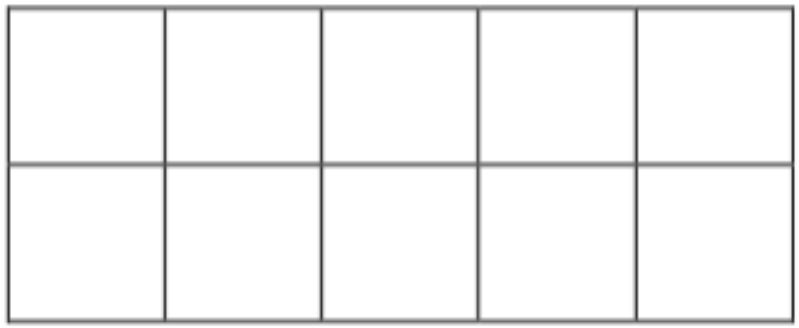
Math Checklists

Traditional Trajectory for Perimeter and Area



Perimeter = _____ cm

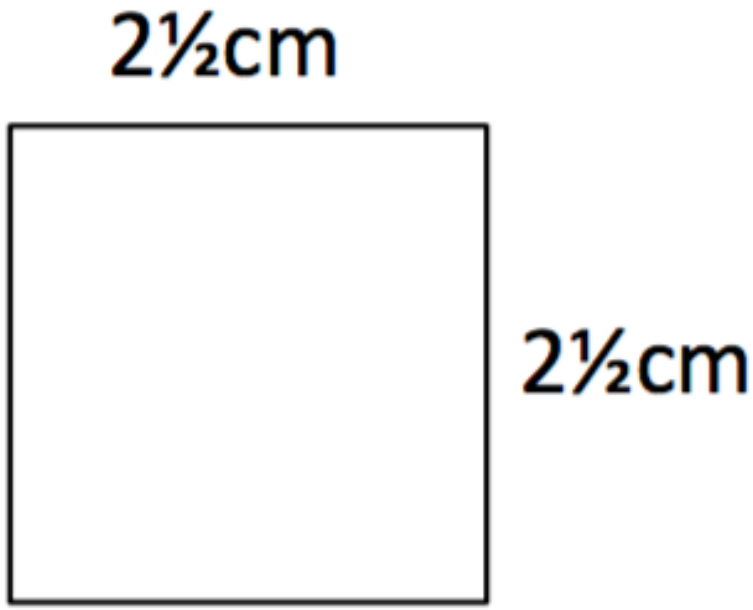
5cm



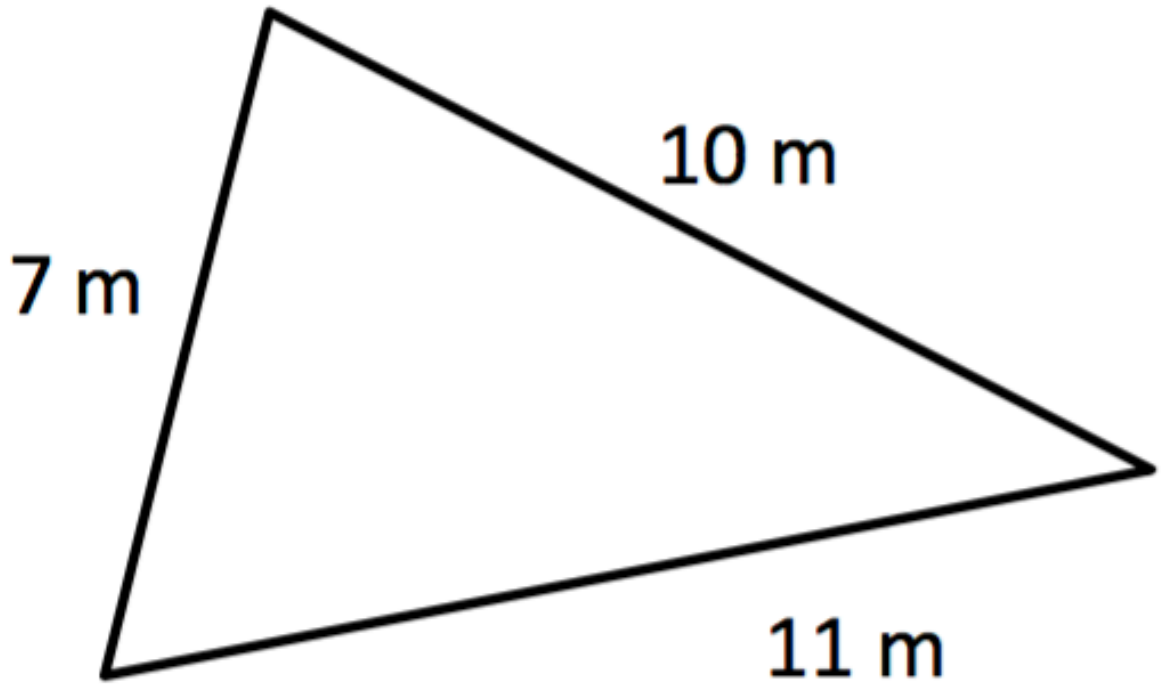
2cm

Perimeter = _____ cm

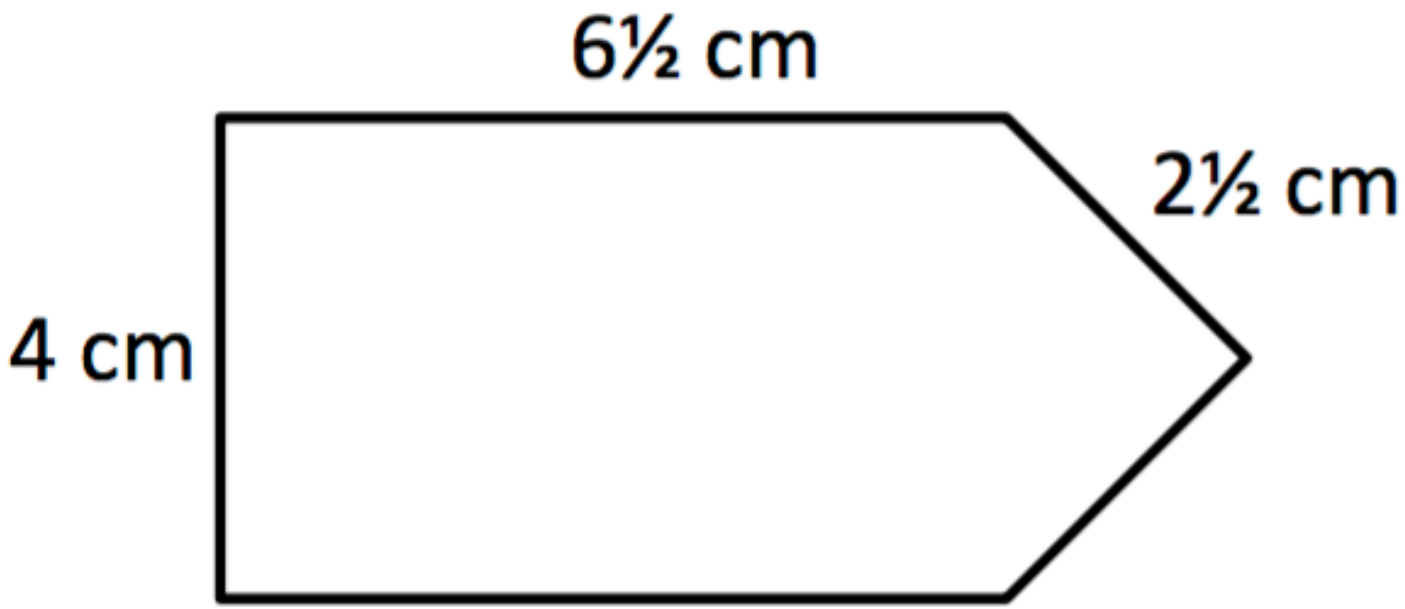
Perimeter = _____ cm



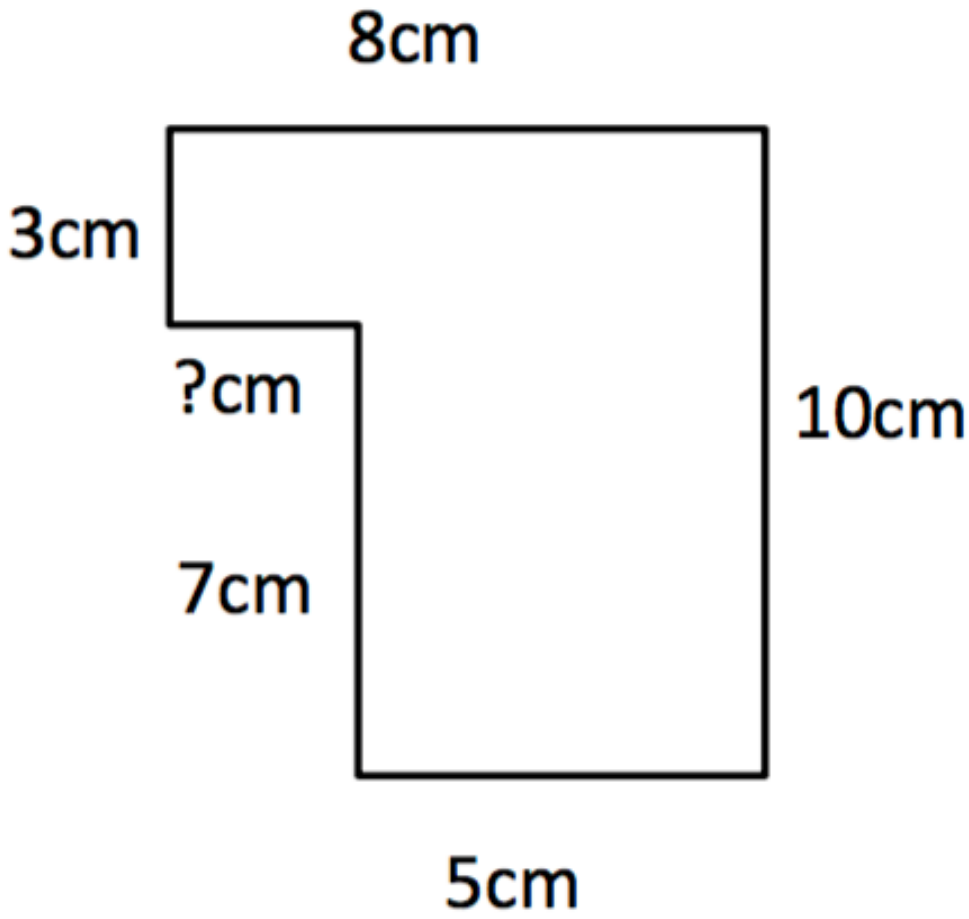
Perimeter = _____ cm

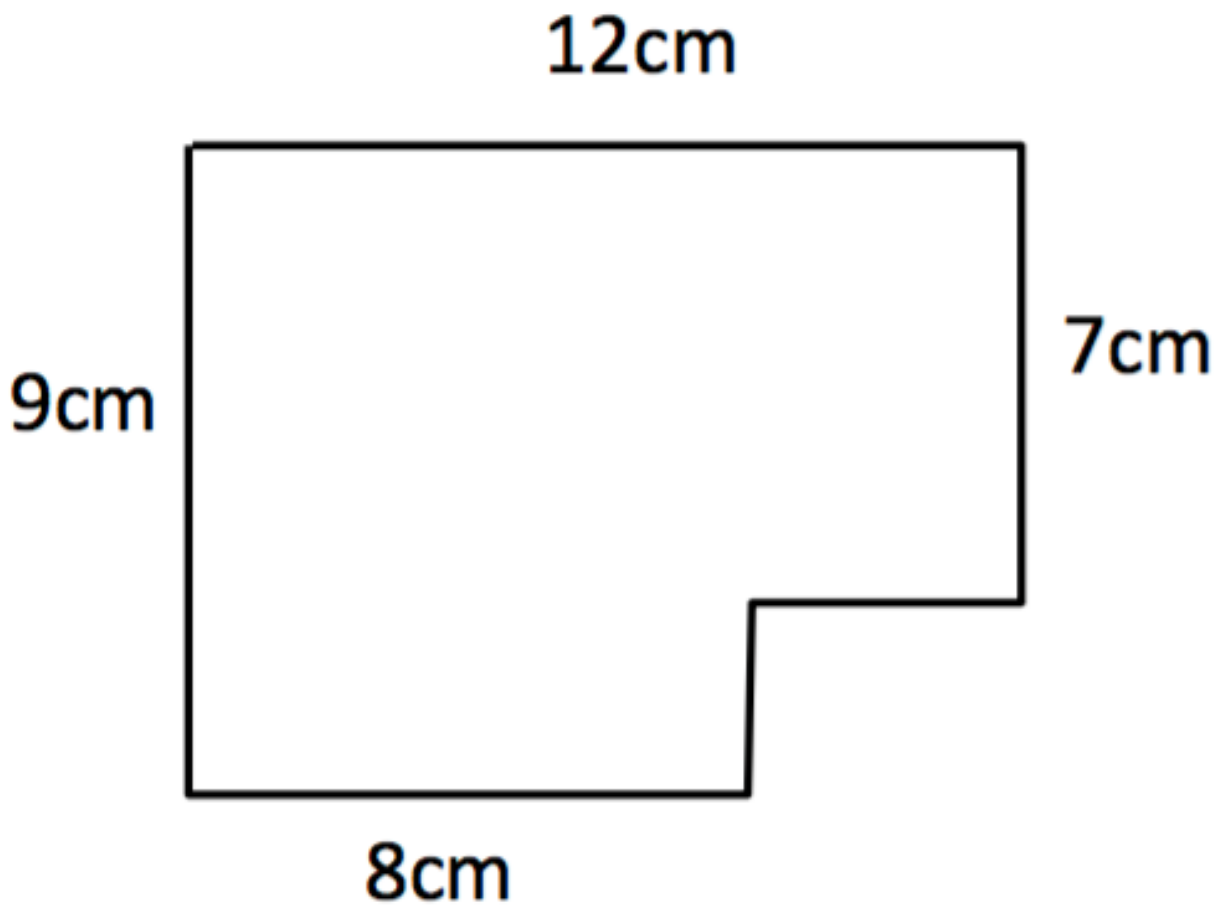


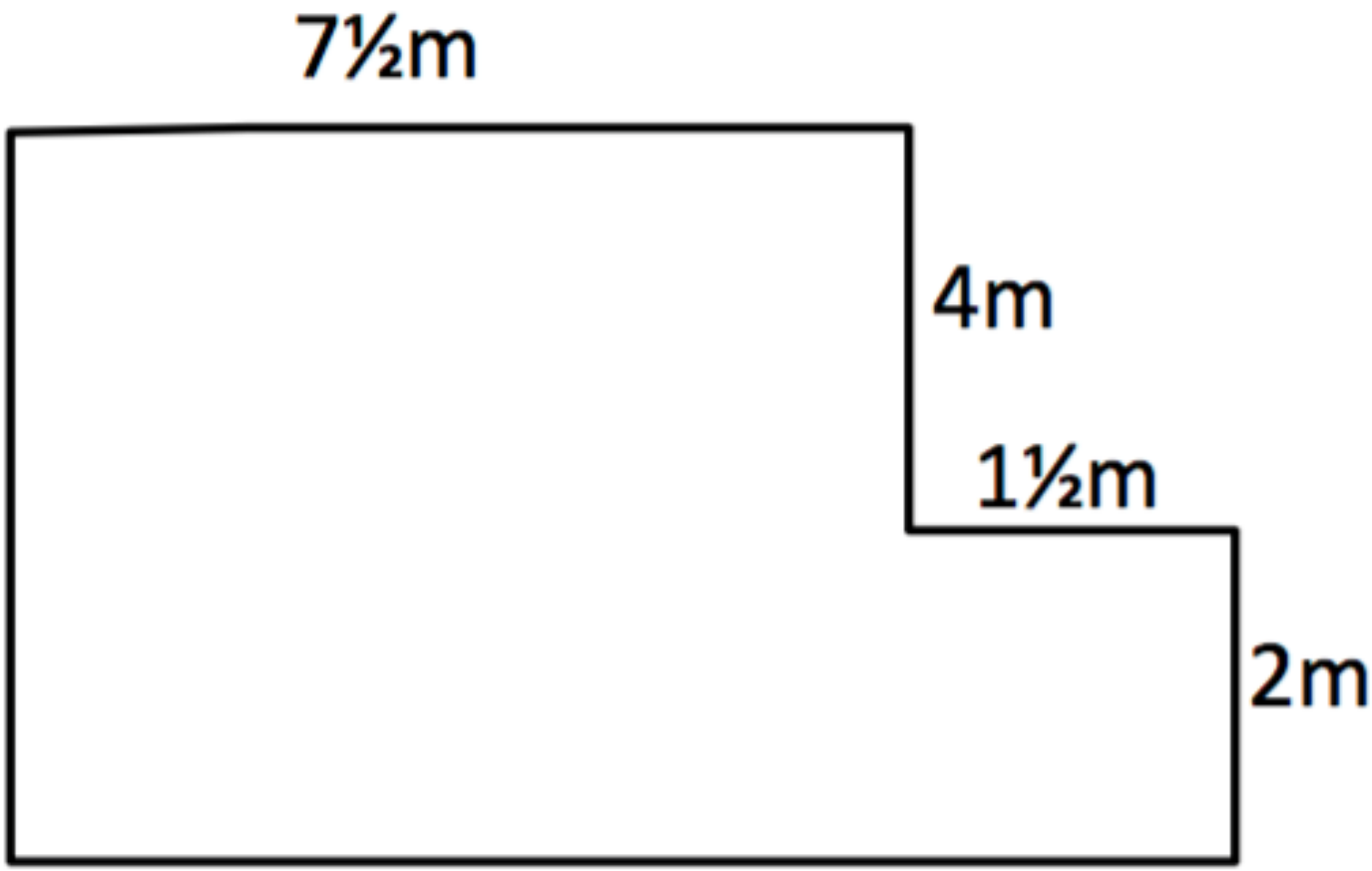
Perimeter = _____ m

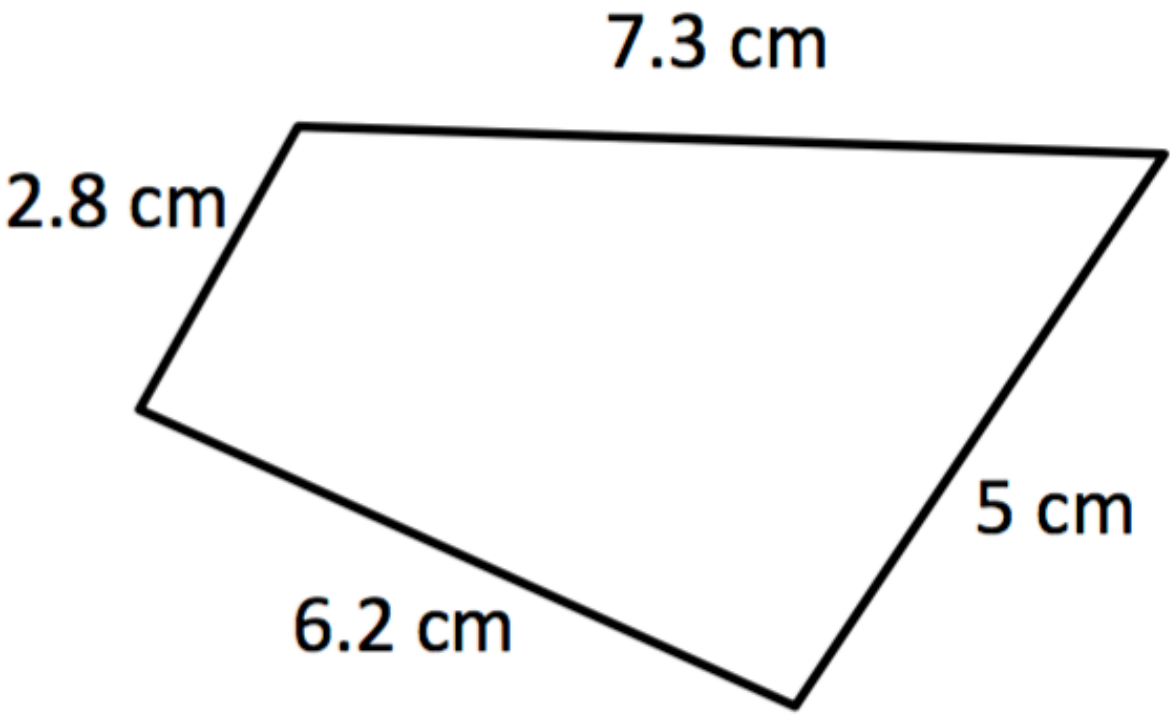


Perimeter = _____ cm

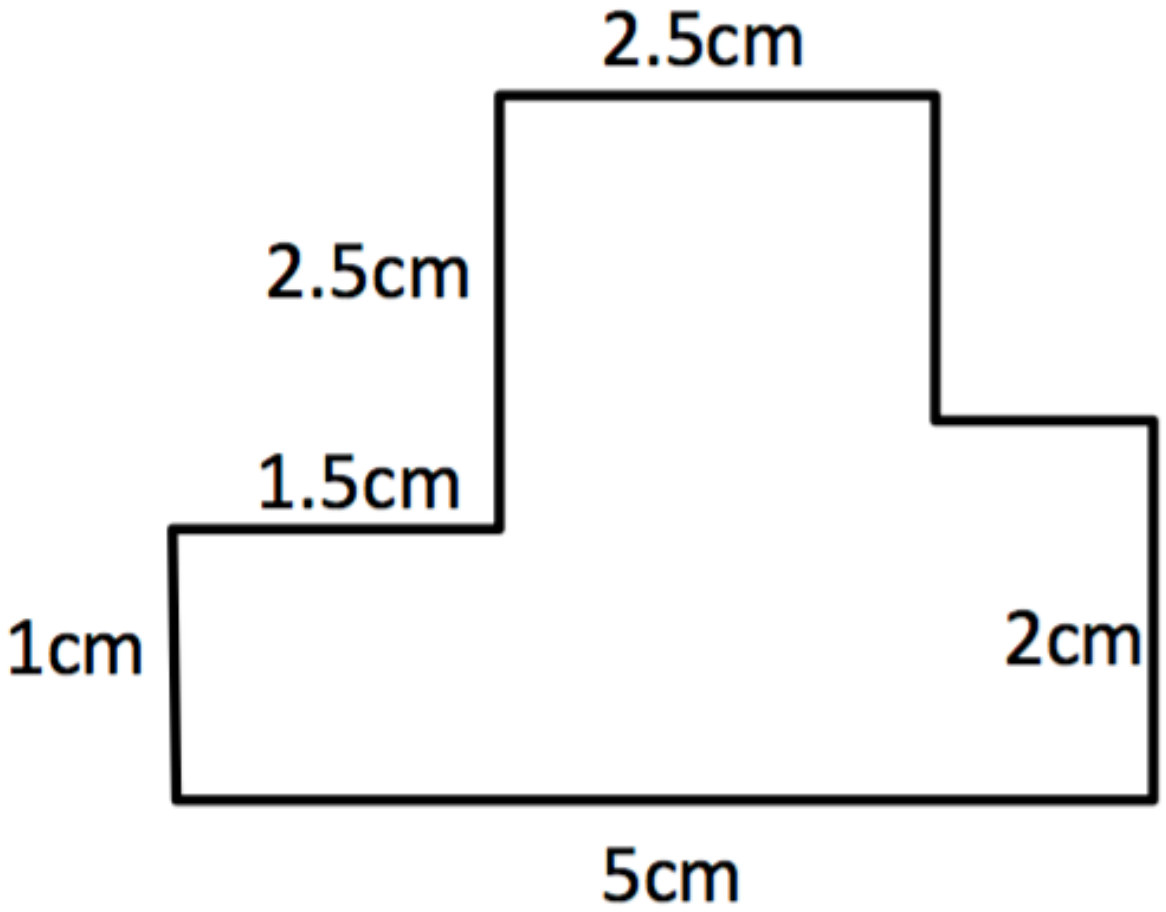

8cm
3cm
?cm
10cm
7cm
5cm

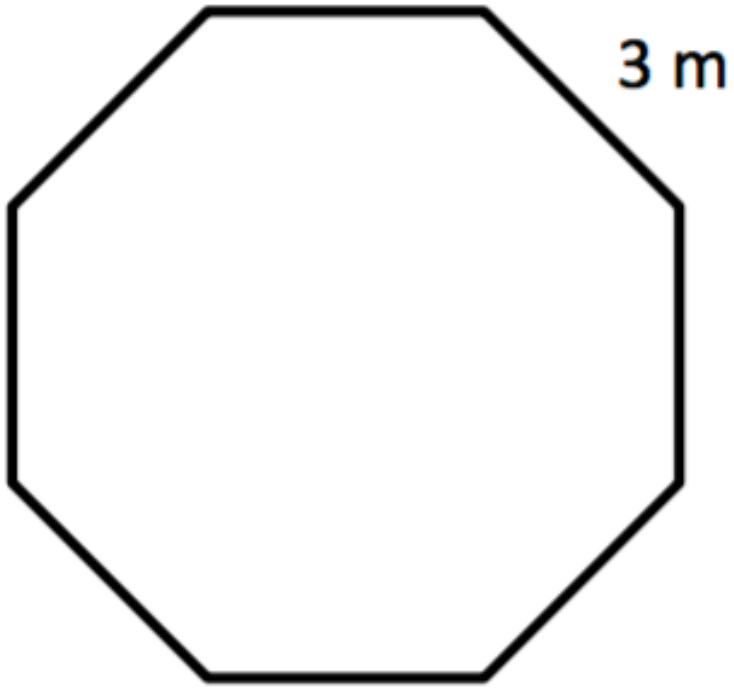

12cm
9cm
7cm
8cm


7½m
4m
1½m
2m

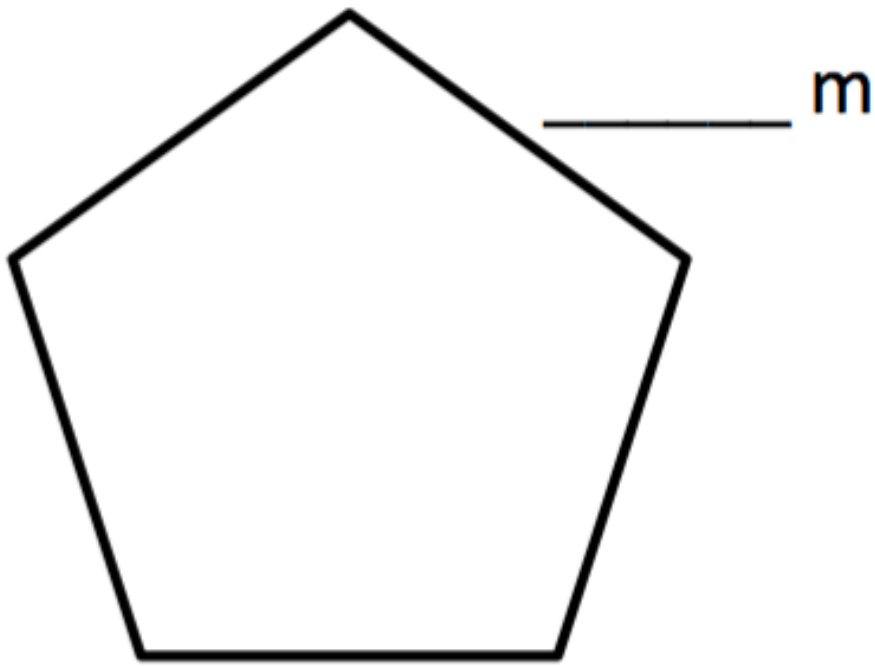


Perimeter = _____ cm


2.5cm
2.5cm
1.5cm
1cm
2cm
5cm



Perimeter = _____



Perimeter = 30 m

A rectangle measures 7 m by 4 m.

Perimeter = _____ m

A square has a side that measures 8 cm.

Perimeter = _____ cm

An equilateral triangle
has a side that measures 21 in.

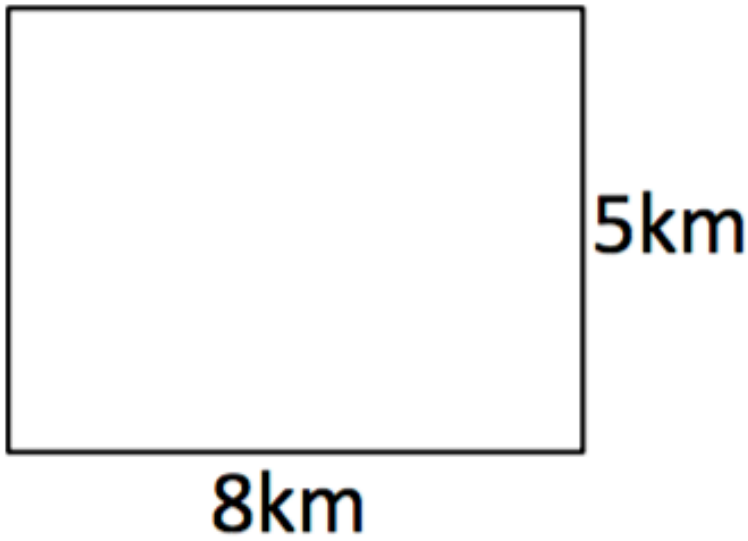
Perimeter = _____ in

A regular hexagon
has a side that measures 11 ft.

Perimeter = _____ ft

Area = _____ square cm

Perimeter = _____ cm



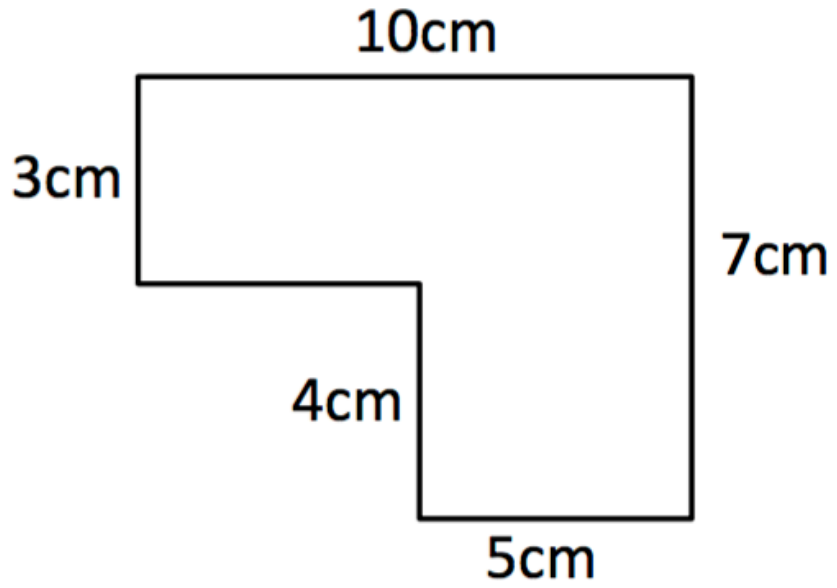
Area = _____ square km

Perimeter = _____ km

A rectangle measures 4 m by 3 m.

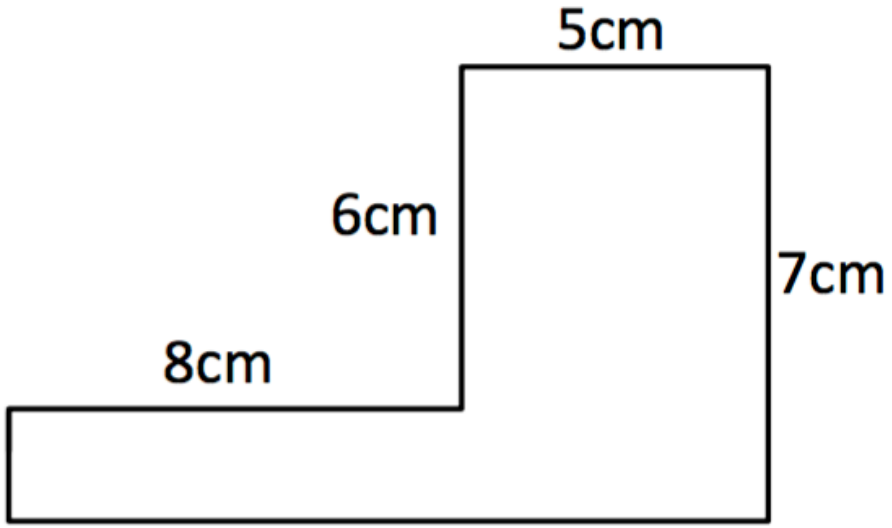
Perimeter = _____ m

Area = _____ square m



Area = _____ square cm (cm^2)

Perimeter = _____ m



Area = _____ square cm (cm^2)

Perimeter = _____ m

Classroom Explorations

Activity

36 Units Around

Area & Perimeter Questions

Dicey Area

Dicey Perimeter

Pentomino Puzzler

Three Different Rectangles

Characteristics

Low Floor - High Ceiling

Open-Ended

Active and Engaging

Rooted in Questions

Invite Communication

Opportunities to Struggle

Call on Number Sense

Multi-dimensional

Beliefs About Math

Everyone can learn math to the highest levels

- There is no such thing as a “math” person
- Everyone can reach the highest level they want to, with hard work
- Encourage students to believe in themselves

Mistakes are valuable

- Mistakes grow your brain
- It is good to struggle and make mistakes

Questions are really important

- Always ask rich questions
- Sometimes answer questions with questions

Math is about creativity and making sense

- Math is a creative subject that is, at its core, about visualizing patterns and creating solution paths that others can see

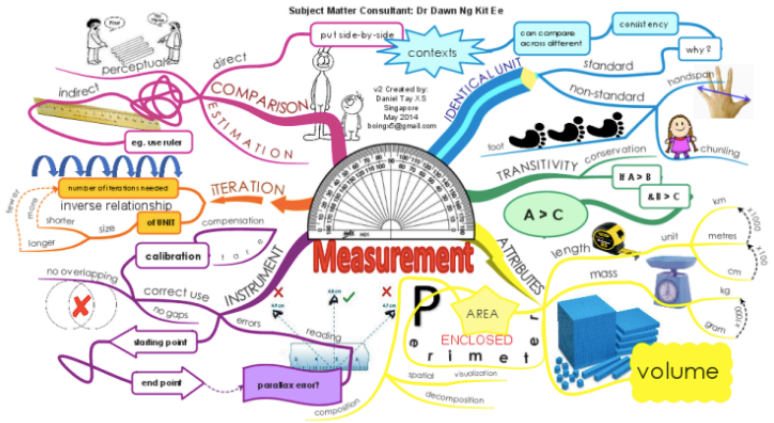
- Creativity is about finding non-standard, original, innovative solution methods

Math is about connections and communicating

- Math is a connected subject and a form of communication

- Math is represented in different forms:

  Words, Pictures, Graphs, Equations,…

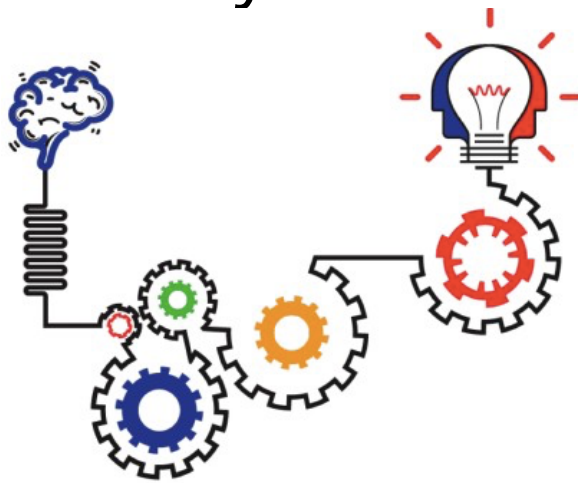


Depth is much more important than speed

- Top mathematicians think slowly and deeply
- Faster doesn't mean "smarter"

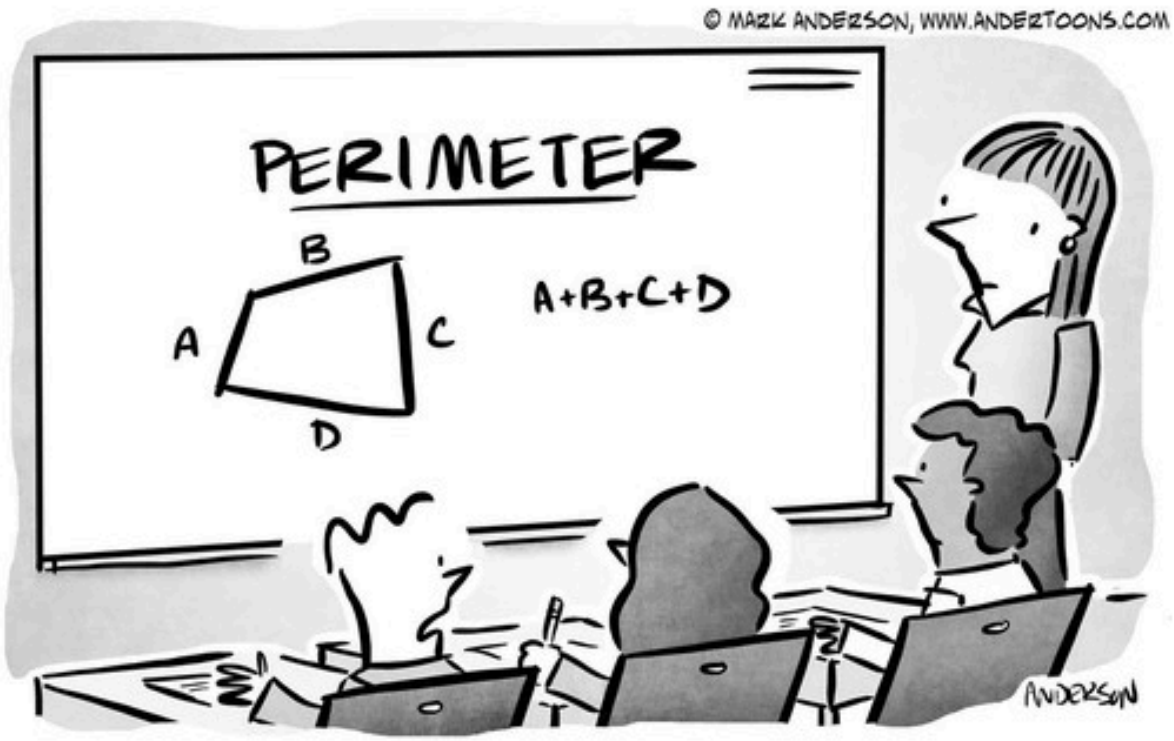
Math class is about learning, not performing

- Math is a growth subject, it takes time to learn and it is all about effort
- Active, engaging tasks might not yield written evidence
- Teachers often confer with students



Math is “open”

- Students see math differently
- Students are encouraged to use and share different ideas, methods, and perspectives



"Or you could just walk around the edge and let your fitness tracker tell you the distance."