Unfold the Solids

Sort solids by the faces in their nets.

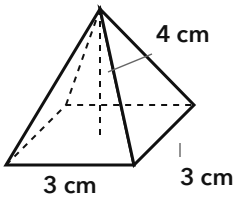
5.GM.1.3 "Recognize and draw a net for a three-dimensional figure (cube, rectangular prism, pyramid)."

NAME _____ DATE _____

NEEDS TRIANGLES

A net in this group needs triangular faces. Look for flat sides that meet at a single tip.

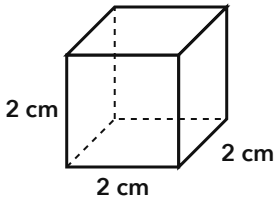
This square pyramid has four triangular sides and a square base.



ONLY RECTANGLES

A net in this group has no triangles. Every face is a rectangle, and a square counts as a rectangle.

This cube-shaped gift box unfolds into six squares.



1 SORT

8 items

Circle a group for each figure, then choose one figure from each group and explain each choice using the faces in its net.

1.

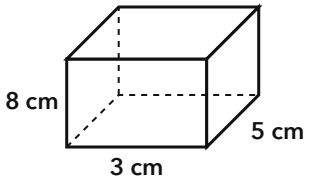


Figure 1

TRIANGLES RECTANGLES

2.

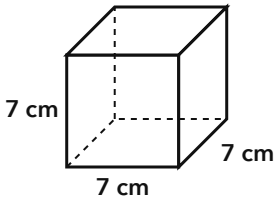


Figure 2

TRIANGLES RECTANGLES

3.

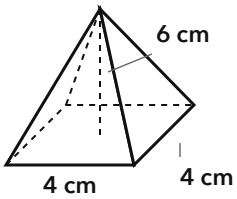


Figure 3

TRIANGLES **RECTANGLES**

4.

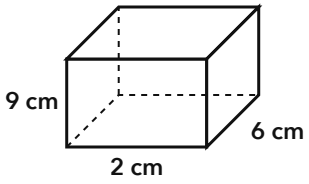


Figure 4

TRIANGLES **RECTANGLES**

5.

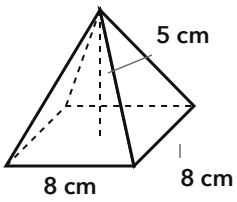


Figure 5

TRIANGLES **RECTANGLES**

6.

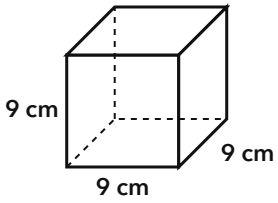


Figure 6

TRIANGLES **RECTANGLES**

7.

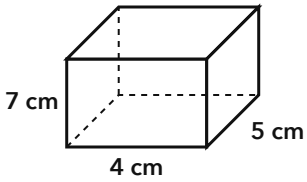


Figure 7

TRIANGLES **RECTANGLES**

8.

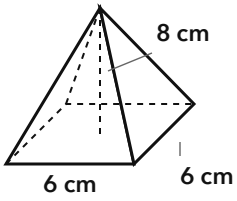


Figure 8

TRIANGLES **RECTANGLES**

2 PROVE IT

Explain your thinking

Choose one figure from each group and explain each choice using the faces in its net.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new real-world object shaped like a solid whose net needs triangles and one shaped like a solid whose net has only rectangles; name each solid.

TRIANGLES _____

RECTANGLES _____

CHALLENGE

Draw a net for Figure 3 and label the shape of every face.

ANSWER KEY

Unfold the Solids

GRADE 5 · 5.GM.1.3

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (prism)	**RECTANGLES**	A rectangular prism has six rectangular faces.
2	Figure 2 (cube)	**RECTANGLES**	A cube has six square faces, which are rectangles.
3	Figure 3 (pyramid)	**TRIANGLES**	The square pyramid has four triangular side faces.
4	Figure 4 (prism)	**RECTANGLES**	A rectangular prism has no triangular faces.
5	Figure 5 (pyramid)	**TRIANGLES**	The side faces of the square pyramid are triangles.
6	Figure 6 (cube)	**RECTANGLES**	A cube's net contains squares and no triangles.
7	Figure 7 (prism)	**RECTANGLES**	All six faces of the rectangular prism are rectangles.
8	Figure 8 (pyramid)	**TRIANGLES**	A net for the square pyramid needs four triangular side faces.

PART 2 · PROVE IT

Task: Choose one figure from each group and explain each choice using the faces in its net. Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **TRIANGLES**: A square pyramid-shaped skylight is a square pyramid, so its net needs triangles.
- **RECTANGLES**: A shoebox is a rectangular prism, so its net has only rectangles.

Challenge: A square with one triangle attached to each of its four sides. Label the center face square and each outer face triangle.

Figures 1, 4, and 7 are rectangular prisms. For the explanations, accept answers that identify the faces a net needs, not answers based only on how the solid looks.