

MATH THAT ADDS UP! | sfisher@homeschoolhelp.com

1






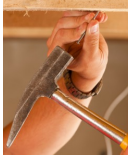


Typical day







2





Typical day





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[illegible][illegible][illegible]

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Trigonometry

- Distances and angles that cannot be measured, but are calculated- coordinates, GPS
- Land surveys
- Astronomers
- Navigators
- Civil engineers depend on devices and algorithms involving trigonometry (life and safety)

10

Nets activity

Faces, edges, vertices

What is meant by the net of a solid?

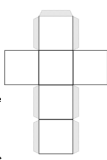
A **geometry net** is a 2-dimensional shape that can be folded to form a 3-dimensional shape or a solid. Or a net is a pattern made when the surface of a three-dimensional figure is laid out flat showing each face of the figure. A solid may have different nets.

Below are the steps to determine whether a net forms a solid:

1. Make sure that the solid and the net have the same number of faces and that the shapes of the faces of the solid match the shapes of the corresponding faces in the net.
2. Visualize how the net is to be folded to form the solid and make sure that all the sides fit together properly.

Nets are helpful when we need to find the surface area of the solids. Scroll down the page to see how the nets fold to form the various shapes.

3. Understand volume and surface area of an object



Surface area of a solid

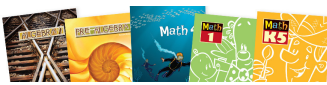
<http://www.math-salamanders.com/geometry-nets.html>

<http://www.onlinemathlearning.com/geometry-nets.html>

<http://www.kidzone.ws/math/geometry/nets/index.htm>

11

BJU Press Math Goals



- Students who understand math
- Students who enjoy learning about math
- Students who solve math problems in life
- Students who compute accurately
- Students who have an interest in the uses of math
- Students who apply math concepts to their every day lives in service to their neighbor; to exercise dominion, and to glorify God.

12




13



14




15



WHY USE MANIPULATIVES?

- enhance child's ability to transfer learning to related math concepts
- encourages thinking and reasoning
- build a foundation of math understanding that students apply to problem solving

16




TEACHING WITH MANIPULATIVES

Always let children use manipulatives when they are introduced to a new concept while teacher demonstrates and assesses.

Teach for understanding by using a logical progression from concrete to abstract to learn the concept well.


17



TEACHING WITH MANIPULATIVES

Connect the use of manipulatives to the understanding of the operation of the answer.

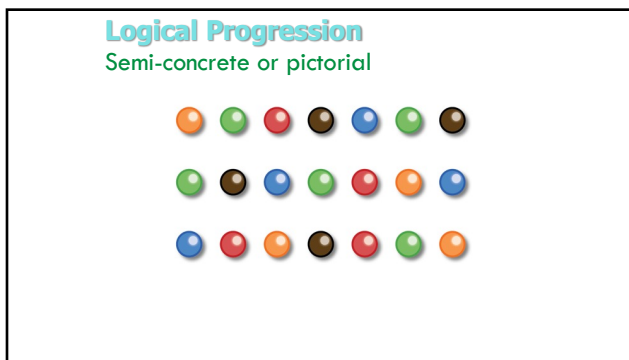
$3 \times 7 =$
 $\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$



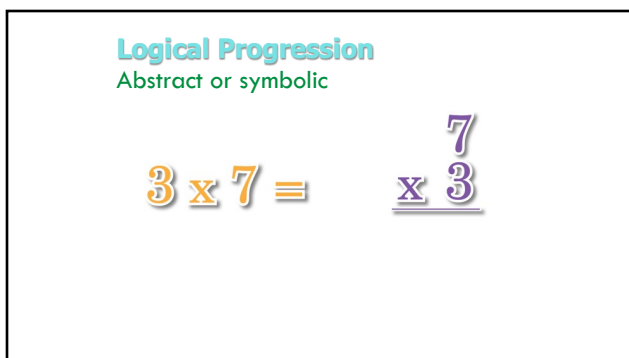
18



19



20



21

TEACHING WITH MANIPULATIVES

Connect the use of manipulatives to abstract problems.

- While teaching less-concrete lessons, refer to the manipulative activities and demonstrate again if necessary.



22

TEACHING WITH MANIPULATIVES

Allow children to explore new materials before teaching with them.

Discuss appropriate behavior for using, storing, and distributing materials.



23

HOW DO I MANAGE ALL OF THESE MANIPULATIVES?


Storage

Organizing & Storing BJU Press Math Manipulatives

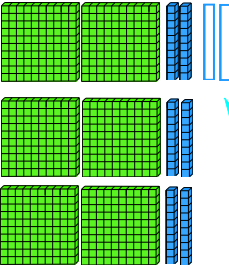
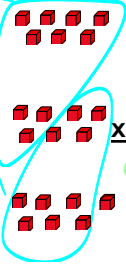
<https://youtu.be/awVa8ynP9ss>



24

	<p>Sample Lesson</p> <p>Let's work through this problem together...</p>  <p>I have 3 bags of marshmallows.</p> <p>I need 227 from each bag to do a geometry activity with my class.</p> <p>How many total marshmallows do I need for this activity?</p>	
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25

	 <div style="display: inline-block; vertical-align: middle; text-align: center;">  $\begin{array}{r} 227 \\ \times 3 \\ \hline 681 \end{array}$ </div>	
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26
