6th GRADE MATH
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<u>WEEK OF April 27th-May 1st</u>

<mark>The lesson/review will be the videos and the 3 "Examples &Try it!" problems. Do this <u>BEFORE</u> the Math XL assignment for each lesson.</mark>
*This is a suggested schedule if you work ahead or at your own pace that is up to you. I will have all the Pearson assignments <u>DUE on Pearson by Sunday May 3rd</u>.

On the next page are notes on Lesson 7-3 and 7-4 to help you throughout the lesson. I have also attached videos of myself doing Try It! Problems for examples 1 and 3.

<u>(4/27) Monday</u>: PEARSON REALIZE 7-3 MathXL for School: Practice & Problem Solving.
         *Do the 6 questions
(Use the help features on the page if stuck!)
~The lesson part of 7-3 was assigned last week. Review the examples/notes~

<u>(4/28) Tuesday</u>:
 PEARSON REALIZE Lesson 7-4 (https://www.pearsonrealize.com)
Watch and do Try it Problems (you cannot type in an answer for the Try it! Problems but you can use the tools on the side bar to solve it on your screen)
         7-4: Example 1 & Try It!
         7-4: Example 2
         7-4: Example 3 & Try it!
Miss Blenk doing Try It! Problems to check your answers
https://youtu.be/FHze5Pe-pbg
https://youtu.be/5axn3O1MvQs

<u>(4/29) Wednesday</u>: Khan Academy (NOT on Pearson)
https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-geometry-topic/cc-6th-area/v/area-comparisons
Watch: Finding area by rearranging parts
Watch: Area of a composite shapes
Practice: Practice are of composite shapes
Practice: Area challenge

<u>(4/30) Thursday</u>:
 PEARSON REALIZE 7-4 MathXL for School: Practice & Problem Solving.
         *Do the 9 questions
(Use the help features on the page if stuck!)

<u>(5/1) Friday</u>: PACKET QUIZ- on GoogleClassroom
Instead of collecting the packet and pages from the Ready Book by having you take pictures/scan them into me, this quiz will take the place of the collection of this material. EVERY question is from the "Expression & Equations" packet or the assigned Ready Book pages. Therefore, if you did the packet you just need to fill in your answer. I have turned them all into multiple choice answers, so some might have been short answer questions, but I have turned what your short answer should have been into a multiple-choice option.

Lesson 7-3

KEY CONCEPT

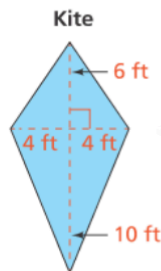You can find the area of a trapezoid or a kite by decomposing the shapes into rectangles and triangles.

Trapezoid

9 m

10 m

4.5 m

18 m

Decompose the trapezoid into two triangles and a rectangle. Find the length of the unknown triangle base.

Kite

6 ft

4 ft | 4 ft

10 ft

Decompose the kite into two identical triangles.

Each triangle: $A = \frac{1}{2}(4.5)(10) = 22.5$

Rectangle: $A = 9(10) = 90$

Trapezoid: $A = 22.5 + 22.5 + 90 = 135$

The area of the trapezoid is 135 m².

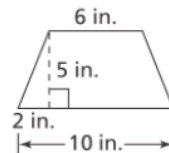Each triangle: $A = \frac{1}{2}(16)(4) = 32$

Kite: $A = 32 + 32 = 64$

The area of the kite is 64 ft².

A **trapezoid** is a quadrilateral with only one pair of opposite sides that are parallel.
A **kite** is a quadrilateral with two pairs of adjacent sides that are equal in length.

1. Is the quadrilateral at the right a trapezoid, a kite, or both?

6 in.

5 in.

2 in.

10 in.

Trapezoid

2. To find the area of the trapezoid at the right, decompose it into one **rectangle** and one **triangle**.

6 yd

5 yd

8 yd

3. **Rectangle:**
The shorter base of the trapezoid is 6 yd.
So, the length of the rectangle is **6 yd**.
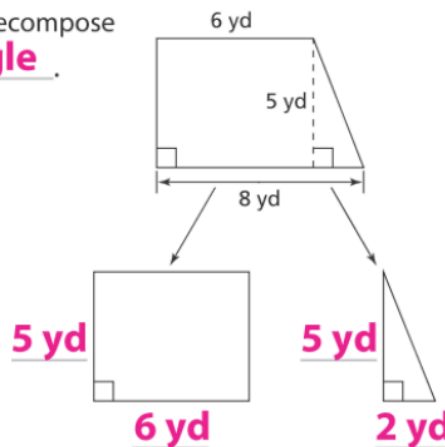
The height of the trapezoid is 5 yd.
So, the width of the rectangle is **5 yd**.

Triangle:
The height of both the trapezoid and the triangle is **5 yd**.

5 yd

6 yd

5 yd

2 yd

Subtract the bases of the trapezoid to find the base of the triangle. 8 − **6** = **2** yd.

Label the shapes at the right by writing on the blank lines.

4. Find the areas of the rectangle and the triangle.

Rectangle

$A = \ell \times$ **w**

$A =$ **6** $\times$ **5** $=$ **30** yd²

Triangle

$A = \frac{1}{2} \times$ **b** $\times h$

$A = \frac{1}{2} \times$ **2** $\times$ **5** $=$ **5** yd²

5. The area of the trapezoid is the sum of the areas of the rectangle and the triangle. The area of the trapezoid is **35** yd².

Lesson 7-4

There are many ways to find the area of a polygon. You can decompose or compose shapes, or you can use addition or subtraction, to calculate the area.

Use Addition

12 cm

8 cm

6 cm

12 cm
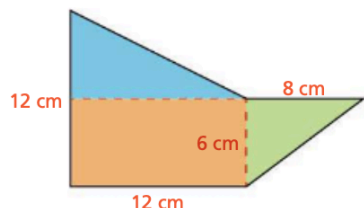
Blue triangle: $A = \frac{1}{2}(12)(6) = 36$
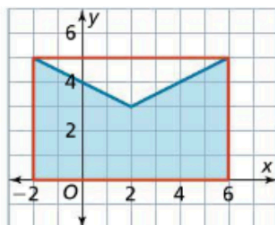
Green triangle: $A = \frac{1}{2}(8)(6) = 24$

Rectangle: $A = (12)(6) = 72$

$36 + 24 + 72 = 132$

The area of the polygon is 132 cm ^{2}.

Use Subtraction

Draw a rectangle around the polygon.

Rectangle: $A = 8 \times 5 = 40$

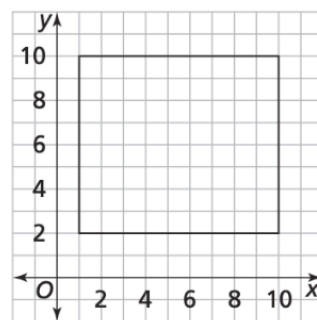Triangle: $A = \frac{1}{2} \times 8 \times 2 = 8$

$40 - 8 = 32$

The area of the polygon is 32 square units.

Compose means "to come together" or "to form." When *de-* is used as a prefix in front of *compose*, it means the opposite of *compose*. **Decompose** means "to take apart."

The **area** of a figure is the number of square units it contains. The length of the rectangle is 9 units and the width of the rectangle is 8 units, so the area is 72 square units.

1. The polygon is composed of three smaller polygons: one **rectangle** and two **triangles**.

2. Find the area of the smaller polygons.

   Rectangle:

   $A = \ell \times$ __**w**__

   $A =$ __**12 ft**__ $\times$ __**9 ft**__

   $A =$ __**108**__ ft²

   Triangle:

   $A = \frac{1}{2} \times$ __**b**__ $\times h$

   $A = \frac{1}{2} \times 12$ ft $\times$ __**2 ft**__

   $A = \frac{1}{2} \times$ **24 ft²** $=$ __**12**__ ft²

   2 ft
   12 ft
   9 ft
   2 ft
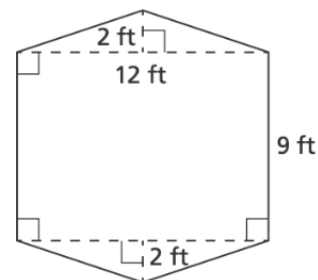
3. Find the total area.

   Area of polygon = Area of **rectangle** $+ 2 \times$ Area of __**triangle**__

   $=$ __**108 ft²**__ $+ 2 \times$ **12 ft²**

   $=$ __**108 ft²**__ $+$ **24 ft²**

   $=$ __**132**__ ft²

   So, the total area of the polygon is **132 ft²**.