

Name: Key

Hour: _____

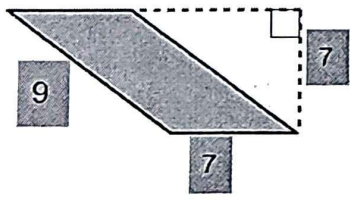
Unit 1 Mid-Unit Assessment Study Guide

Fill in the table below with useful information from this unit so far to help you answer the questions on your study guide.

Area of Polygons	
Polygons	Formula, Notes, or Strategies
Rectangle	$A = b \cdot h$ $A = l \cdot w$
Parallelogram	$A = b \cdot h$ Rearrange
Triangle	$A = \frac{b \cdot h}{2}$ • Enclose
Trapezoid	$A = \frac{(b_1 + b_2) \cdot h}{2}$ Decompose

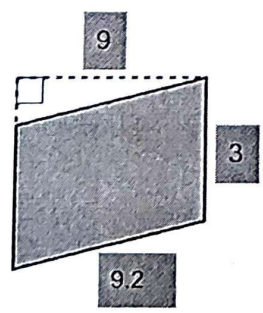
For numbers 1-5, find the area of each polygon. Make sure to show your work or explain your answer. Don't forget to include appropriate labels on each of your answers.

1)



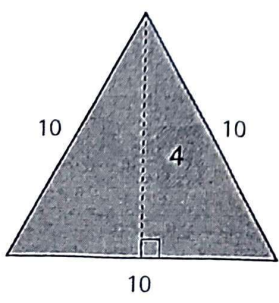
~~9 * 7 = 63 square units~~
 $7 \cdot 7 = 49$ square units

2)



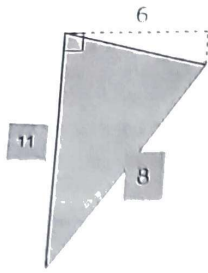
$3 \cdot 9 = 27$ square units

3)



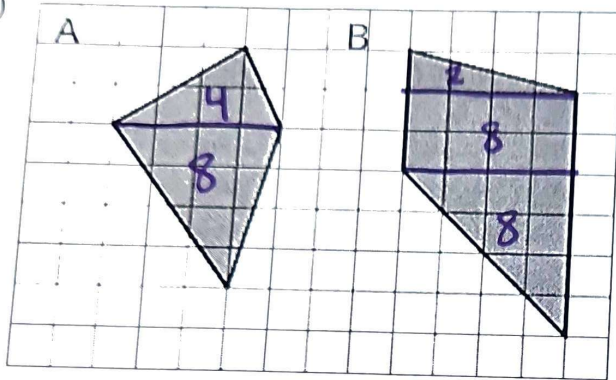
$\frac{10 \cdot 4}{2} = \frac{40}{2} = 20$ square units

4)



$$\frac{6 \cdot 11}{2} = \frac{66}{2} = 33 \text{ square units}$$

5)

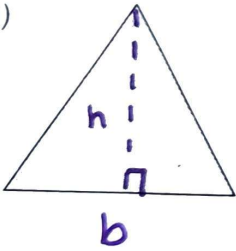


A) $4 + 8 = 12$ square units

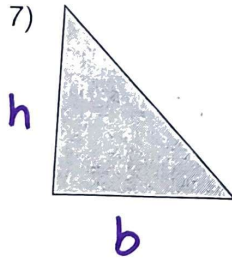
B) $2 + 8 + 8 = 18$ square units

For numbers 6-8, label a base and then label the corresponding height.

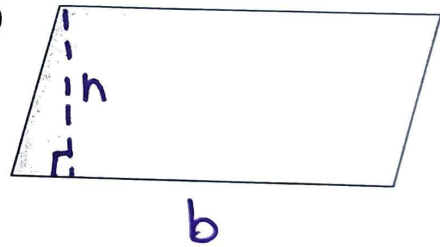
6)



7)

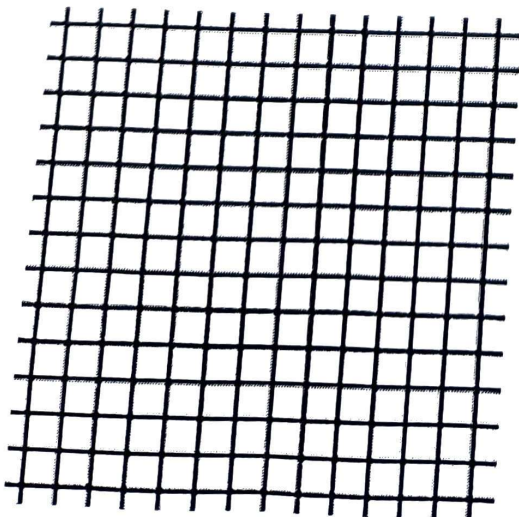


8)



For numbers 9-10, follow the directions to create polygons.

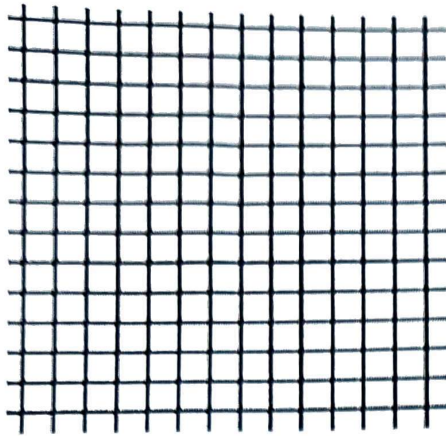
9) Draw two different parallelograms with an area of 12 units squared on the grid below.



Any parallelograms w/
base/height:

$2+6$ or $3+4$

10) Draw two different triangles with an area of 12 units squared on the grid below.



Any triangles w/
base/height:

~~1, 12~~ 2, 12
3, 8
4, 6

For numbers 11-13, find the missing dimension based on the information given.

11) If the area of a triangle is 36 inches squared and the height is 9 inches, what is the base of the triangle?

$$36 \div 9 \cdot 2 = 8 \text{ in}$$

12) If the area of a parallelogram is 56 centimeters squared and the base is 7 centimeters, what is the height of the parallelogram?

$$56 \div 7 = 8 \text{ cm}$$

13) If the base of a triangle is 8 feet and the height is 6 feet, what is the area of the triangle?

$$\frac{8 \cdot 6}{2} = \frac{48}{2} = 24 \text{ ft}^2$$

For numbers 14-25, fill in the blank using the word bank to match the definition to the vocabulary word.

Word Bank

area
base
compose
corresponding height

decompose
edge
opposite vertex
parallelogram

polygon
quadrilateral
triangle
vertex

- 14) area: number of square units that cover a two-dimensional region, without any gaps or overlaps.
- 15) parallelogram: a type of quadrilateral that has two pairs of parallel sides
- 16) corresponding height: the shortest distance from the base of the shape to the opposite side that forms a right angle with the base
- 17) vertex: point where two or more edges meet
- 18) opposite vertex: in a triangle, the one vertex that is not on the same side as the base
- 19) compose: put together
- 20) edge: straight side of a polygon
- 21) base: a side of the shape that forms a right angle with the height
- 22) decompose: take apart
- 23) polygon: a closed, two-dimensional shape with straight sides that do not cross each other
- 24) quadrilateral: a type of polygon that has 4 sides
- 25) triangle: a type of polygon that has 3 sides