

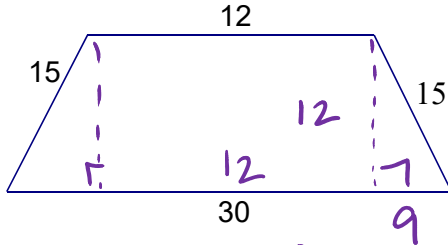
Geo H

11.3 and 11.4 Practice

Name:

All of the following diagrams are trapezoids!

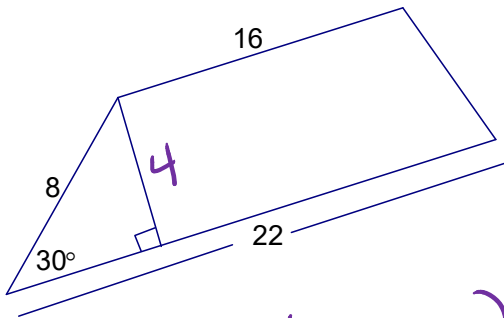
1. Find the area of the trapezoid below.



$$A = \frac{1}{2} \cdot 12 \cdot (12 + 30)$$

$$= 252$$

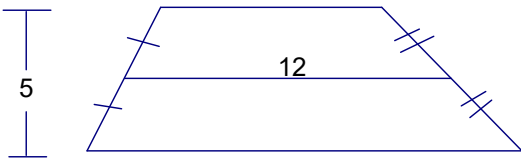
3. Find the area of the trapezoid below.



$$A = \frac{1}{2} \cdot 4 \cdot (16 + 22)$$

$$= 76$$

5. Find the area of the trapezoid below.



$$A = 12 \cdot 5$$

$$= 60$$

2. The midline of a trapezoid is 16 and it has area of 400. What is the height of the trapezoid?

$$16 \cdot h = 400$$

$$h = 25$$

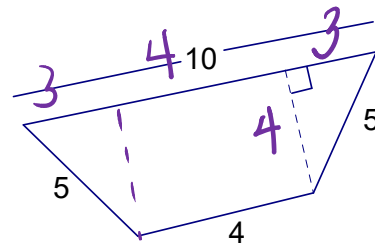
4. The area of a trapezoid is 300 square units and its height is 10. The lower base is twice as long as the upper base. How long is each base?

$$300 = \frac{1}{2} \cdot 10 \cdot (x + 2x)$$

$$x = 20$$

$$2x = 40$$

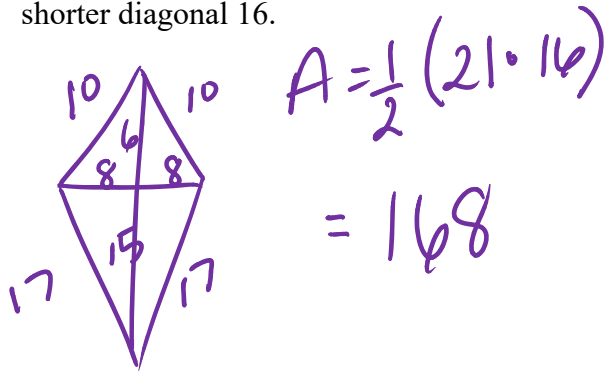
6. Find the area of the trapezoid below.



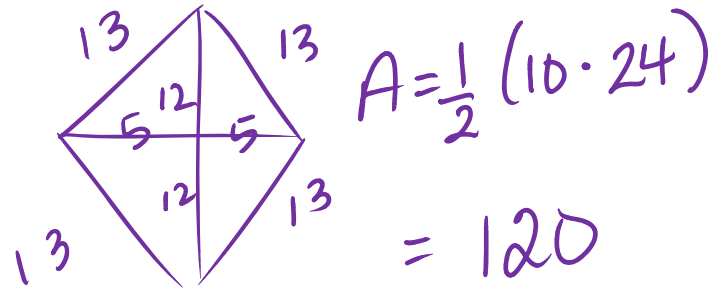
$$A = \frac{1}{2} \cdot 4 \cdot (10 + 4)$$

$$= 28$$

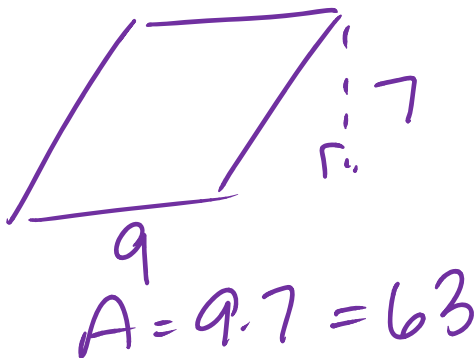
7. Find the area of a kite with sides 10, 10, 17, and 17 with a shorter diagonal 16.



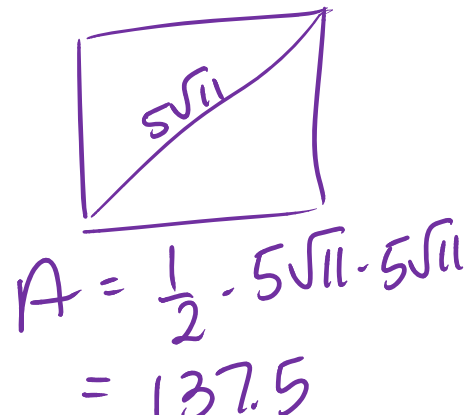
8. Find the area a rhombus whose longer diagonal is 24 and whose perimeter is 52.



9. Find the area of a rhombus with a base of 9 and a height of 7.



10. If a square has a diagonal of $5\sqrt{11}$, find its area.



11. The ratio of the diagonals of a kite is 3:4. If the area of the kite is 150, find the longer diagonal.

$$\frac{1}{2} \cdot 3x \cdot 4x = 150$$

$$\frac{1}{2} \cdot 12x^2 = 150$$

$$12x^2 = 300$$

$$x^2 = 25$$

$$x = 5$$

20

12. Find the area of a rhombus with diagonals of length 20 and 24.

$$A = \frac{1}{2} \cdot 20 \cdot 24$$

$$= 240$$