Name_____ Date_____ Period_____

LESSON 5-1 · SESSION 2 · PRACTICE · FORM B

Area of Rhombuses

Learning target – I can find the area of a rhombus using the base and height or the two diagonals. · 6.G.A.1

REMEMBER

- A **rhombus** has 4 equal sides. It is a parallelogram, so **A = b × h** works.
- With two **diagonals**: **A = d1 × d2 ÷ 2**.
- Missing diagonal: double the area, then divide (24 × 2 = 48, 48 ÷ 6 = 8).

WORKED EXAMPLE

A rhombus has diagonals of 10 cm and 8 cm. Find its area.

Step 1 Use A = d1 × d2 ÷ 2.

Step 2 10 × 8 = 80

Step 3 80 ÷ 2 = 40

Answer **40 cm²**

WORDS **rhombus** *(rombo)* · **diagonal** *(diagonal)* · **congruent** *(congruente)*

PRACTICE

show your work · label units

1. Find the area of each rhombus. Choose the formula that fits.

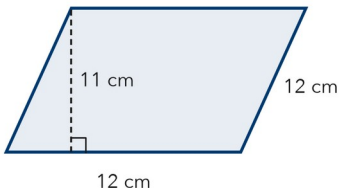
a. diagonals 12 m and 9 m ____

b. base 13 in, height 8 in ____

c. diagonals 16 m and 5 m ____

d. base 7 cm, height 5 cm ____

2. **Backsplash Tile.** A rhombus tile has sides of 12 cm and a height of 11 cm. Find its area.

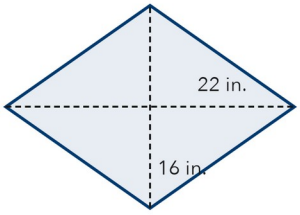


Hint *Any side can be the base.*

Show your work.

Answer_____ cm²

3. **Paper Kite.** A kite is a rhombus. Find its area.



Hint *Multiply the diagonals, then divide by 2.*

Show your work.

Answer_____ in²

4. **Quilt Patch.** A rhombus patch has an area of 126 cm². Its sides are 14 cm. Find its height.

Answer_____ cm

5. **Window.** A rhombus window has an area of 108 cm² and a height of 9 cm. Find its base.

Answer_____ cm

6. Sail Panel. A rhombus sail panel has diagonals of 20 ft and 26 ft. Find its area.

Show your work.

Answer _____ ft²

7. Missing Diagonal. A rhombus sign has an area of 45 m². One diagonal is 9 m. Find the other diagonal.

Hint *Double the area, then divide by 9.*

Show your work.

Answer _____ m

8. Bike-Lane Marker. A rhombus marker has diagonals of 24 in. and 18 in. One strip of tape covers 54 in².

Hint *Doubling both diagonals multiplies the area by 2 × 2.*

a. Find the area. _____ in²

b. How many strips cover it? _____

c. Both diagonals are doubled. Find the new area. How many times larger is it? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Nia's Work. A rhombus has diagonals of 12 ft and 9 ft. Nia wrote: "A = 12 × 9 = 108 ft²." Explain her mistake. Then find the area.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. A rhombus has diagonals of 20 in. and 9 in. What is its area?

A 29 in² **B** 45 in² **C** 90 in² **D** 180 in²

11. Which expression finds the area of a rhombus from its diagonals?

A d1 + d2 **B** d1 × d2 **C** (d1 × d2) ÷ 2 **D** 2 × d1 × d2

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

10	9	5	352	520	176	216	260	12	132
O	L	X	Q	Z	O	N	G	Y	P

#2	#3	#4	#5	#6	#7	#8a

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___