Name_____ Date_____ Period_____

LESSON 5-8 · SESSION 2 · PRACTICE · FORM B

Lateral Area of Pyramids

Learning target – I can find the lateral area of a pyramid, which covers only its slanted faces. · 6.G.A.4

REMEMBER

- **Lateral area** = the slanted faces only. Do **not** include the base.
- **Surface area** = lateral area + base area.
- A triangle-base pyramid has **3** slanted faces; a square pyramid has **4**.

WORKED EXAMPLE

Square base 4 m; slant height 6 m; only the sides are covered.

Step 1 Leave out the base.

Step 2 One triangle: ½ × 4 × 6 = 12 m².

Step 3 Four triangles: 4 × 12 = 48.

Answer **lateral area = 48 m²**

WORDS **lateral area** *(área lateral)* · **surface area** *(área superficial)* · **slant height** *(altura inclinada)*

PRACTICE

show your work · label units

1. Find each lateral area.

a. 4 faces, each 30 cm² ___ cm²

b. SA = 180 in², base = 64 in² ___ in²

c. square base 5 m, slant 8 m ___ m²

d. square base 12 in, slant 9 in ___ in²

2. **Canvas Frame.** Jamal's frame is a pyramid with a triangle base (18 in sides) and slant height 10 in. Only the slanted faces get canvas.

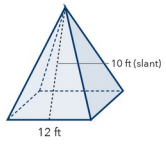
a. Faces that get canvas _____

b. One slanted face _____ in²

c. Canvas needed _____ in²

Show your work.

3. **Open-Bottom Tent.** This tent is a square pyramid. The floor is open ground.



a. One panel _____ ft²

b. Fabric for the tent _____ ft²

c. Total if the floor were covered _____ ft²

Show your work.

4. **Gazebo Roof.** A square pyramid roof has base 16 ft and slant height 9 ft. Only its slanted faces get shingles.

Show your work.

Answer_____ ft²

5. **Tower Cap.** A square pyramid cap has base 18 m and slant height 15 m. Only its slanted faces are copper.

Show your work.

Answer_____ m²

6. **Display Pyramid.** A display is a square pyramid: base 20 in, slant height 24 in. Every face is wrapped, base included. How much paper?

Hint *Include the base.*

Show your work.

Answer_____ in²

7. **Luis's Canvas.** A square pyramid has base 24 cm and slant height 15 cm. Luis says the four slanted faces cover 1,440 cm². Is Luis right?

Hint *Find one slanted face first.*

Show your work.

Answer_____ cm²

8. **Tent Cover.** A shelter is a square pyramid: base 12 ft, slant height 8 ft, open floor. Canvas costs $4 per ft².

Hint *Find the lateral area first, then multiply by the price.*

a. Lateral area _____ ft²

b. Cost of the canvas _____

c. Total SA; why use lateral area here? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. **Grace's Work.** A square pyramid has base 12 cm and slant height 7 cm. Only the slanted faces are painted. Grace wrote: "Area = 144 + 168 = 312 cm²." Explain the mistake and fix it.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. Total surface area equals lateral area plus the –

A base area **B** slant height **C** apex **D** one triangle

11. How many slanted faces does a square pyramid have?

A 3 **B** 4 **C** 5 **D** 6

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

1,440 Q	192 G	720 A	288 V	768 E	540 E	240 O	864 Z	1,360 R	270 C

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

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