Name_____ Date_____ Period_____

LESSON 5-8 · SESSION 1 · PRACTICE · FORM B

Surface Area of Pyramids

Learning target – I can find the surface area of a pyramid by adding the base area and the areas of its triangular faces. · 6.G.A.4

REMEMBER

- **SA of a pyramid** = base area + area of all the **triangular faces**.
- Each triangle: ½ × base edge × **slant height** (not the straight-up height).
- A square pyramid has 1 square + **4** matching triangles.

WORKED EXAMPLE

Square base 10 cm; slant height 7 cm.

Step 1 Base: 10 × 10 = 100 cm².

Step 2 One triangle: ½ × 10 × 7 = 35 cm².

Step 3 Four triangles: 140. Add: 100 + 140.

Answer **SA = 240 cm²**

WORDS **slant height** *(altura inclinada)* · **lateral face** *(cara lateral)* · **apex** *(ápice)*

PRACTICE

show your work · label units

1. Find the surface area of each square pyramid.

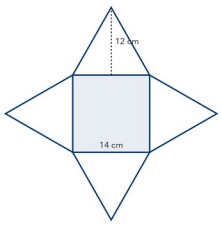
a. base 6 m, slant height 8 m ___ m²

b. base 4 ft, slant height 7 ft ___ ft²

c. base 3 cm, slant height 5 cm ___ cm²

d. base 9 in, slant height 10 in ___ in²

2. **Pyramid Model.** A class model is a square pyramid. Its net is shown.



a. Area of the square base _____ cm²

b. Area of one triangle _____ cm²

c. Surface area _____ cm²

3. **Gift Topper.** A gift topper is a square pyramid with a base 10 in on each side and a slant height of 13 in. Find its surface area.

Hint *Base first, then four triangles.*

Show your work.

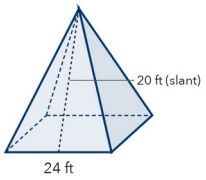
Answer_____ in²

4. **Trophy Top.** A trophy top is a square pyramid with a base 8 cm on each side and a slant height of 9 cm. Every face is plated. Find its surface area.

Show your work.

Answer_____ cm²

5. Roof Cap. Every face of this roof cap, including the bottom, will be shingled. Find its surface area.



Hint *Use the slant height for each triangle.*

Show your work.

Answer_____ ft²

6. Dante's Pyramid. A square pyramid has base 16 cm and slant height 11 cm. Dante says its surface area is 88 cm². Is Dante right?

Hint *Which faces of the net are missing from 88?*

Show your work.

Answer_____ cm²

7. Sand Mold. A sand mold is a square pyramid: base 12 in, slant height 14 in. Every face counts. Find its surface area.

Hint *Add the base to all 4 triangles.*

Show your work.

Answer_____ in²

8. Museum Model. A museum model is a square pyramid: base 10 in, slant height 12 in. Gold foil covers only the four triangles. Foil costs $0.05 per in².

a. Base area and one triangle _____

b. Total surface area _____ in²

c. Cost of the foil _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Mia's Work. A square pyramid has a base 20 in on each side and a slant height of 15 in. Mia wrote: "SA = 400 + 150 = 550 in²." Explain the mistake and fix it.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. How many faces does a square pyramid have in all?

A 4 **B** 5 **C** 6 **D** 8

11. A base of 36 cm² plus four triangles of 15 cm² each gives a surface area of –

A 51 cm² **B** 60 cm² **C** 96 cm² **D** 540 cm²

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

960 Z	12 T	88 Q	480 E	340 N	360 O	1,536 U	532 M	208 N	608 M

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

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