Name_____ Date_____ Period_____

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

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.

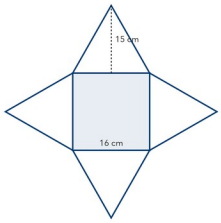
a. base 8 m, slant height 10 m ___ m²

b. base 5 ft, slant height 8 ft ___ ft²

c. base 2 cm, slant height 3 cm ___ cm²

d. base 7 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 8 in on each side and a slant height of 11 in. Find its surface area.

Hint *Base first, then four triangles.*

Show your work.

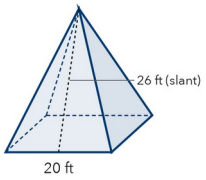
Answer_____ in²

4. **Trophy Top.** A trophy top is a square pyramid with a base 12 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. Priya's Pyramid. A square pyramid has base 18 cm and slant height 13 cm. Priya says its surface area is 117 cm². Is Priya right?

Hint *Which faces of the net are missing from 117?*

Show your work.

Answer_____ cm²

7. Sand Mold. A sand mold is a square pyramid: base 16 in, slant height 10 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 14 in, slant height 15 in. Gold foil covers only the four triangles. Foil costs $0.04 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. Ethan's Work. A square pyramid has a base 22 in on each side and a slant height of 17 in. Ethan wrote: "SA = 484 + 187 = 671 in²." Explain the mistake and fix it.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. How many triangular faces does a square pyramid have?

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

11. A base of 25 cm² plus four triangles of 20 cm² each gives a surface area of –

A 45 cm² **B** 80 cm² **C** 100 cm² **D** 105 cm²

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

360 R	576 I	16.80 S	1,040 Z	240 Y	736 P	1,440 A	616 D	792 M	117 Q

#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 #___