Dear Super Sixth Grade,

- Today is MATH MONDAY! In the chat, please tell me what are some of the things you have learning about in Math Unit 5!

- How was your weekend? ☺
Let's have a great day!
Mrs. Oakes

I pledge allegiance to the flag of the United States of America, and to the republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

*If you choose not to participate, turn volume down until we move to next slide.

Need Help?

- OFFICE HOURS & STUDY ISLAND HELP SESSIONS

***These are not required, but if you need help,

Please come out!

Homework:

STUDY!!!!!!

YOU HAVE A TEST TOMORROW

STUDY!!!!!!

Student Expectations…

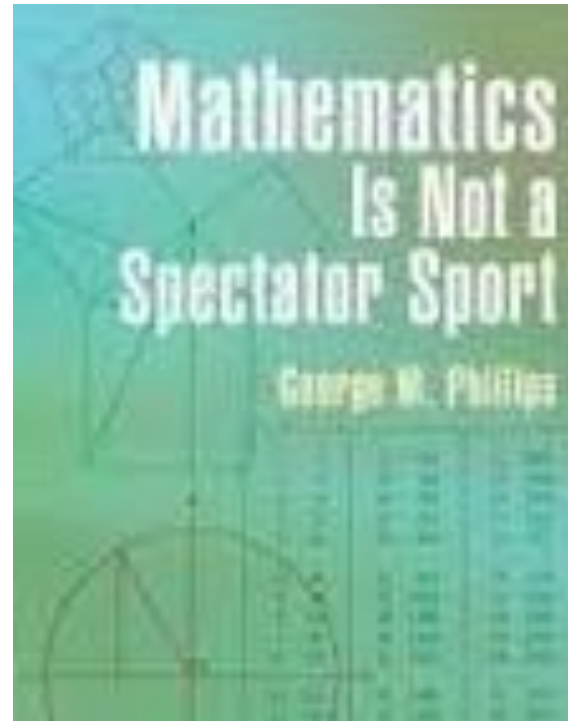Being part of this "school" is awesome! How can YOU make this ocean even more awesome??.

✓I will BE HERE! **respond** **when my name is called, use polling tools , complete classwork, notes, and chat to participate!**

✓I will **choose my attitude!**

✓I will **demonstrate respect and follow directions** for my classmates and teachers to help **make their day**!

✓I will have **fun** learning!

EVERYONE needs a working mic. Call 1-866-K12-care if it's not working. Let's get it fixed!

GET A CALCULATOR AND PENCIL READY!!!!

Unit 5 TEST Review

Objectives:

- Students will review for the Unit 5 Test that they will take tomorrow

- Students will review:
-Cubes and Cube Roots
-Volume
-Surface Area

Part 1:

CUBES AND CUBE ROOTS

Cubing A Number

$$2^3 = 8$$

WHAT IT IS:

2 x 2 x 2 = 8

WHAT IT IS NOT:

2 x 3= 6

What is 4^3

Quick Check:

What is 6^3 ?

A. 18

B. 216

C. 63

D. 36

CUBE ROOTS

Go to START → all programs → accessories → calculator

GO TO VIEW → Change to Scientific!

This is the one
On your computer

To find the CUBE ROOT – insert number, hit the INV button and then hit the $\sqrt[3]{x}$ CUBE ROOT button.

COMMON CUBE ROOTS

Common Cubes and Their Cube Roots

$1^3 = 1$	$\sqrt[3]{1} = 1$
$2^3 = 8$	$\sqrt[3]{8} = 2$
$3^3 = 27$	$\sqrt[3]{27} = 3$
$4^3 = 64$	$\sqrt[3]{64} = 4$
$5^3 = 125$	$\sqrt[3]{125} = 5$
$6^3 = 216$	$\sqrt[3]{216} = 6$
$10^3 = 1000$	$\sqrt[3]{1000} = 10$

Waterfall: What is the Cube Root of 1000?

Put answer in chat

DO NOT SEND

Wait for countdown

Quick Check:

- What is the Cube Root of 512?

A. 51

B. 25

C. 8

D. 170
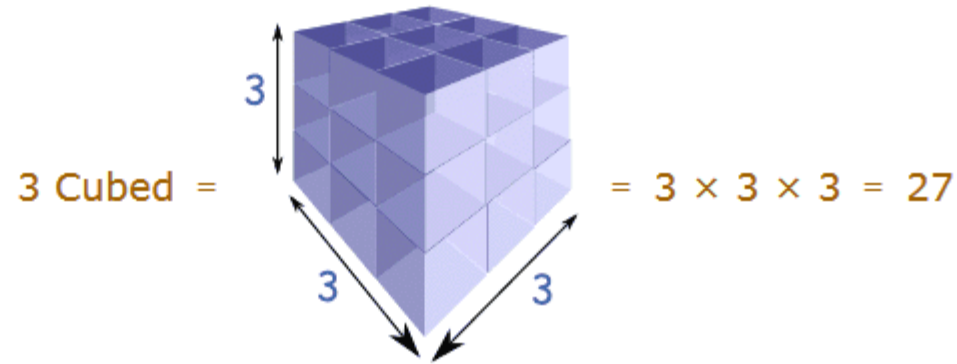
FINDING VOLUME

VOLUME IS HOW MUCH SPACE AN OBJECT
OCCUPIES

VOLUME OF A CUBE
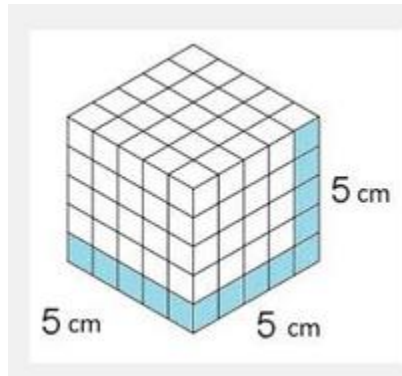
- Volume = Sides Cubed or Volume = Length x Width x Height

3 Cubed = = 3 × 3 × 3 = 27

Note: we write down "3 Cubed" as 3^3
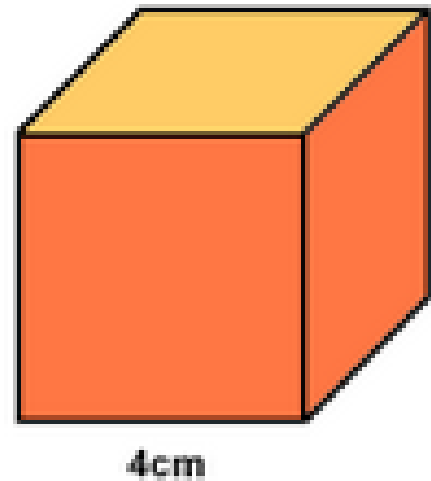(the little ^{3} means the number appears three times in multiplying)

Volume of a CUBE

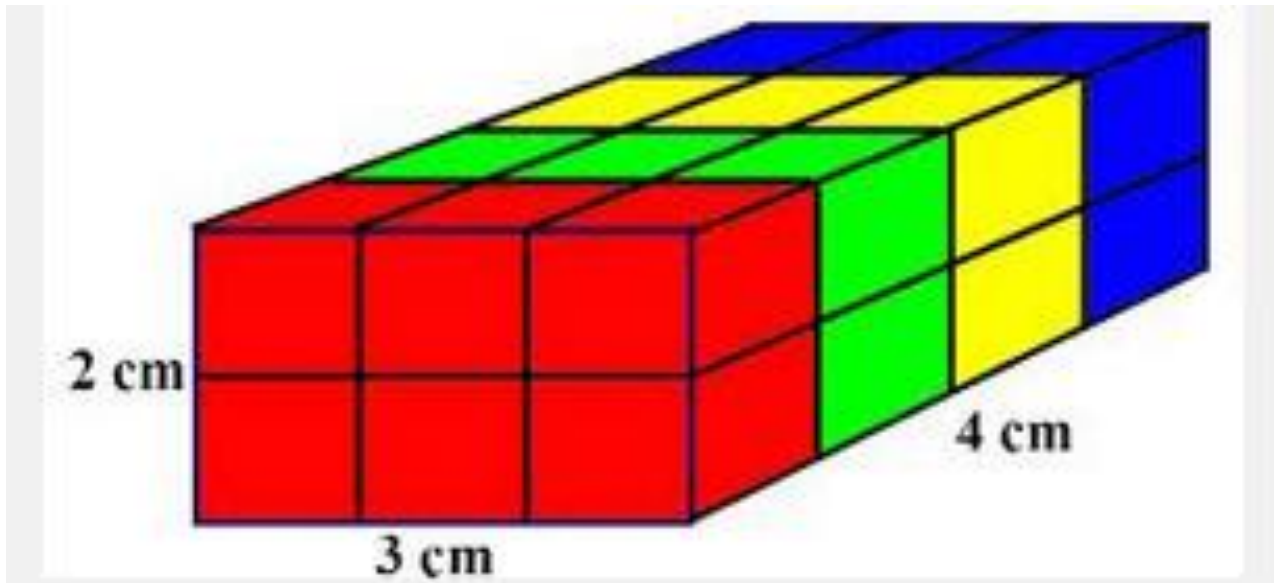- Volume = Sides Cubed or Volume = Length x Width x Height

Quick Check:

- If the side length of a cube is 4 cm long, what is the volume of that cube?

A. 12 cm cubed

B. 16 cm cubed
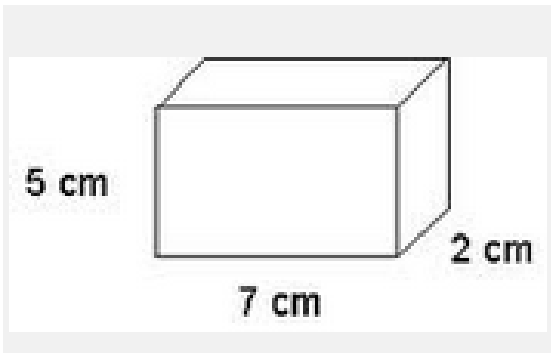
C. 64 cm cubed

D. 44

4cm

Volume of A Rectangular Prism
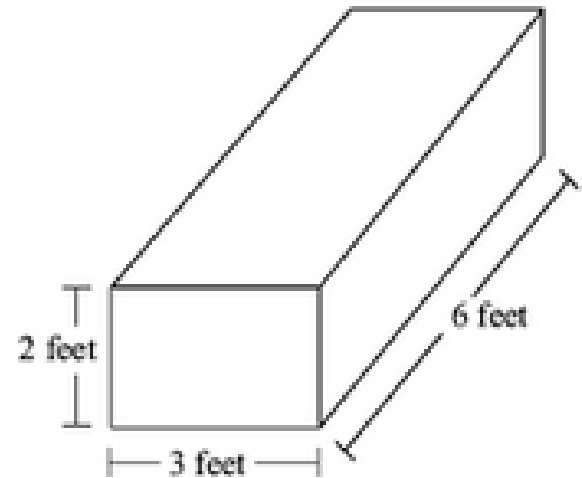
- Volume = length x width x height

Volume of A Rectangular Prism

- Volume = length x width x height

Quick Check

- Find the Volume of this rectangular prism:

A. 11 ft cubed

B. 236 ft cubed

C. 94 ft cube

D. 36 ft cubed

Volume of a Triangular Prism

VOLUME OF A TRIANGULAR PRISM:

Steps:
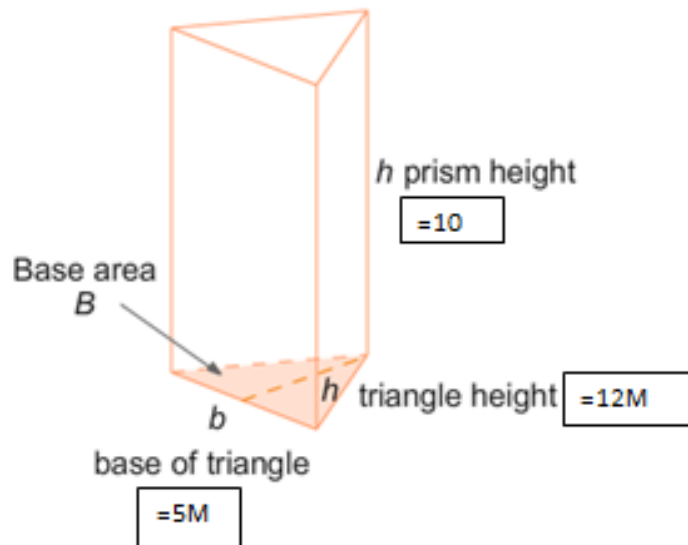
1. Find the area of the triangular face using the formula for area of a triangle. A= BH/2 or A = ½ BH

$$B = \frac{1}{2}\, bh$$

or

$$B = \frac{bh}{2}$$

2. Multiply the area of the triangle by the length of the triangle prism.
3. Those two numbers multiplied together equal your volume.

Base area
B

h prism height
=10

h triangle height =12M

b

base of triangle
=5M

Step 1. Find Area of Triangular Base
A= BH/2
A = 5x 12/ 2
A= 60/2
Area of Triangular base = 30 M squared

Step 2. Multiply area of Triangular base by prism height.

30 x 10 = 300

Volume of Triangular Prism:

300 Meters Cubed

VOLUME OF A TRIANGULAR PRISM:

Steps:
1. Find the area of the triangular face using the formula for area of a triangle. A= BH/2 or A = ½ BH
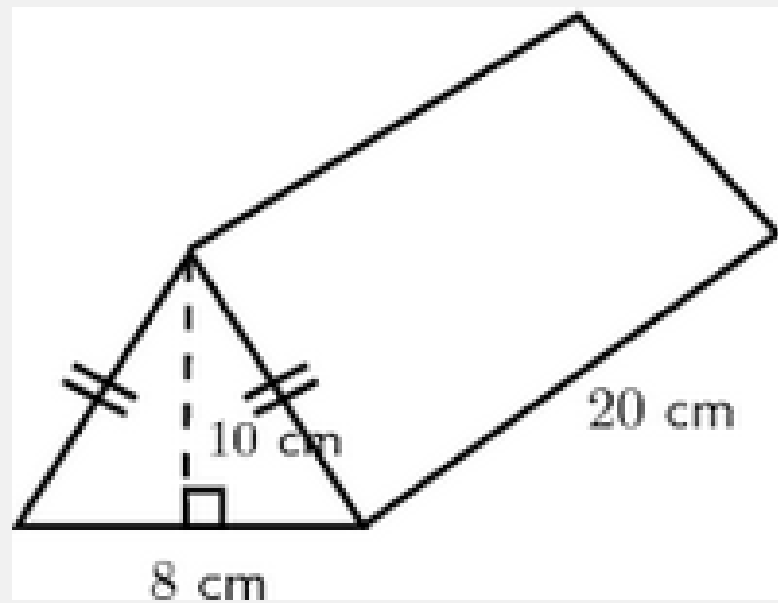
$$B = \frac{1}{2} bh$$

or

$$B = \frac{bh}{2}$$

2. Multiply the area of the triangle by the length of the triangle prism.
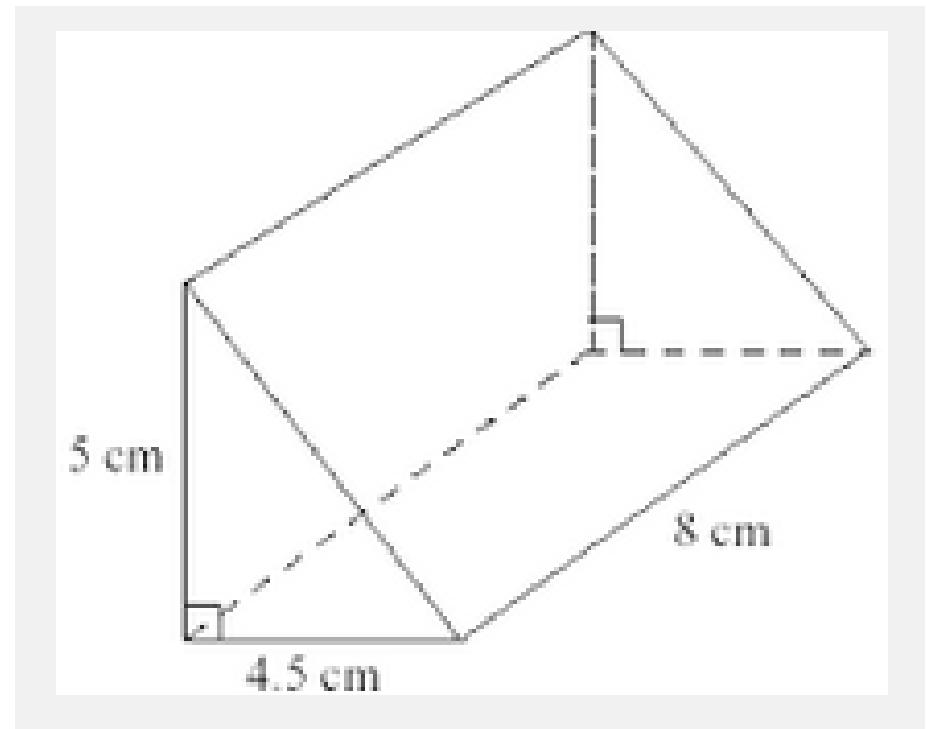3. Those two numbers multiplied together equal your volume.

VOLUME OF A TRIANGULAR PRISM:

Steps:
1. Find the area of the triangular face using the formula for area of a triangle. A= BH/2 or A = ½ BH

$$B = \frac{1}{2} bh$$

or

$$B = \frac{bh}{2}$$

2. Multiply the area of the triangle by the length of the triangle prism.
3. Those two numbers multiplied together equal your volume.
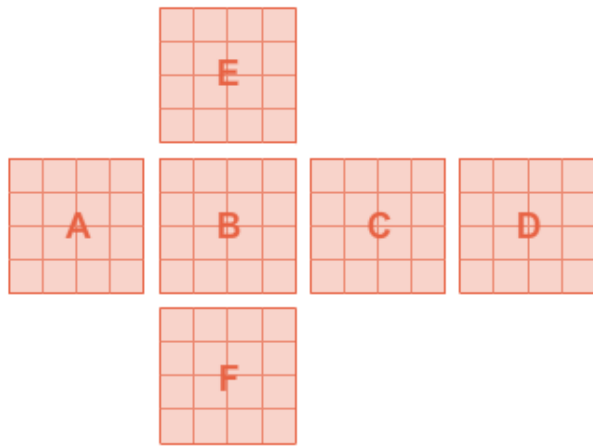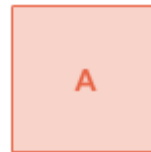
Volume Is:
A.

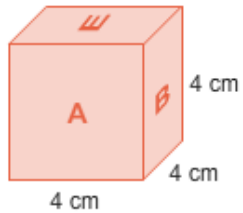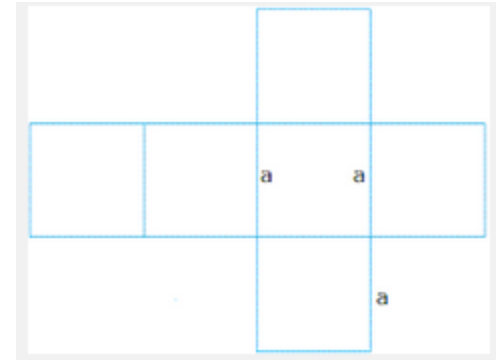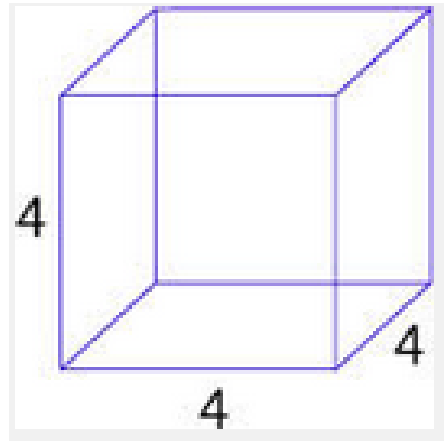B.

C.

D.

5 cm

8 cm

4.5 cm

SURFACE AREA

Surface area is simply finding the area of each side of a shape (3 dimensional object) and adding all of the area together to find the area of each surface for the total surface area of the object

Surface Area of A Cube

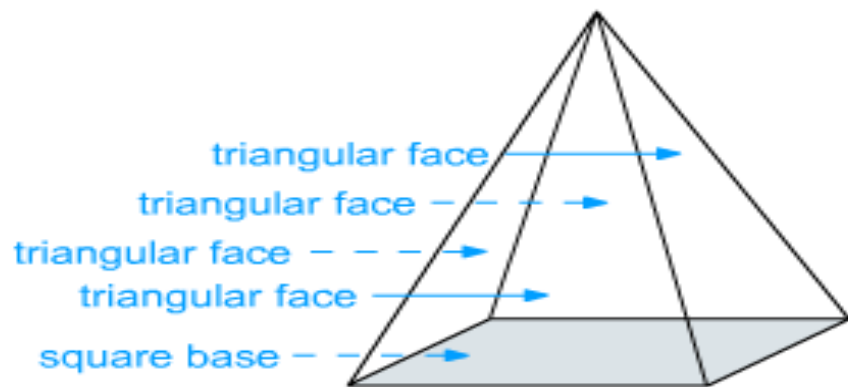Remember a **CUBE has 6 CONGRUENT** (same) **Sides** ☺

Quick Check- FIND THE SURFACE AREA

- A. 64 cm sq.
- B. 16 cm sq
- C. 96 cm sq
- D. 12 cm sq

Square Pyramid

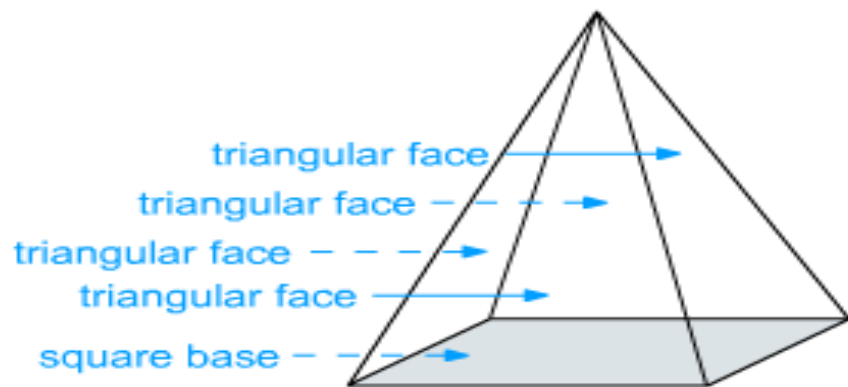This square pyramid is made up of a square base and four congruent triangular faces.

triangular face

triangular face

triangular face

triangular face

square base

surface area = base area + total area of triangular faces

Square Pyramid

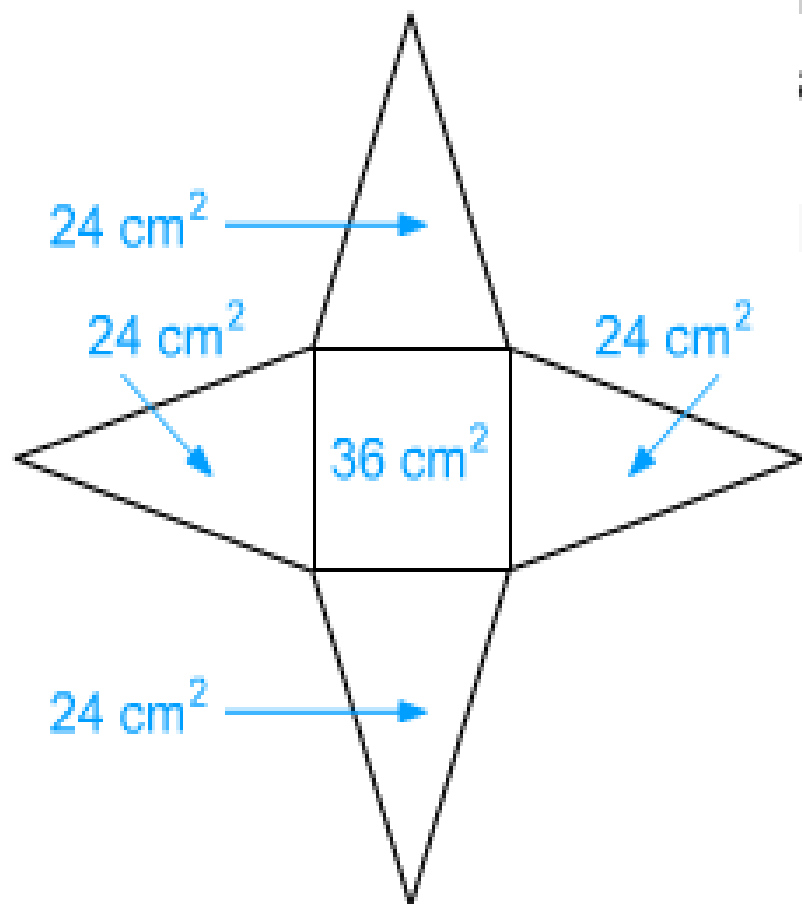This square pyramid is made up of a square base and four congruent triangular faces.

triangular face
triangular face
triangular face
triangular face
square base

surface area = base area + total area of triangular faces

Square Pyramid

What is the surface area of a square pyramid that has a base area of 36 cm^2 and triangular faces with areas 24 cm^2 each?

base area = 36 cm^2

area of each triangular face = 24 cm^2

First find the total area of triangular faces

$$\text{Area}_{faces} = 4 \cdot 24 \text{ cm}^2$$
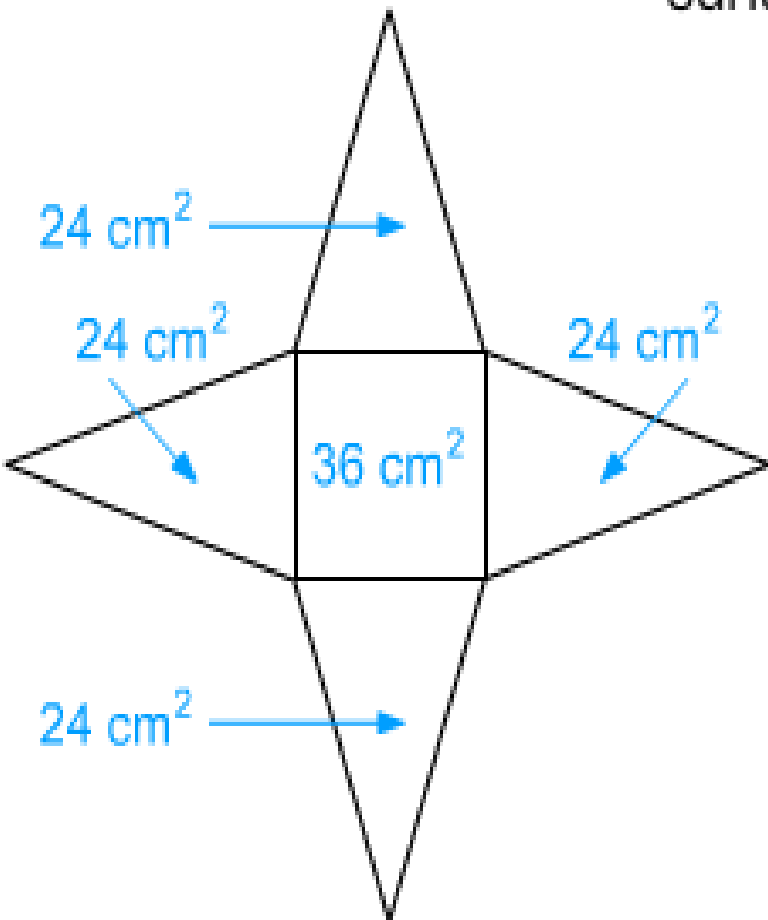
$$= \boxed{} \text{ cm}^2$$

24 cm^2

24 cm^2

24 cm^2

36 cm^2

24 cm^2

Check

Square Pyramid

What is the surface area of a square pyramid that has a base area of 36 cm^2 and triangular faces with areas 24 cm^2 each?

24 cm^2

24 cm^2

24 cm^2

36 cm^2

24 cm^2

surface area = base area + total area of triangular faces

= ☐ + 96
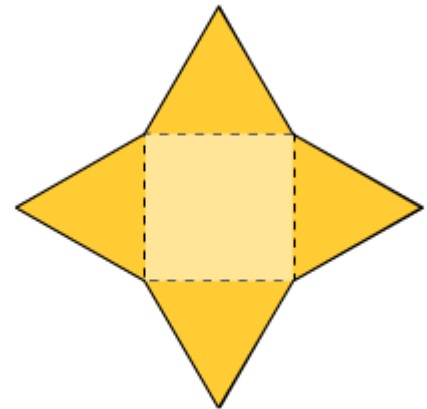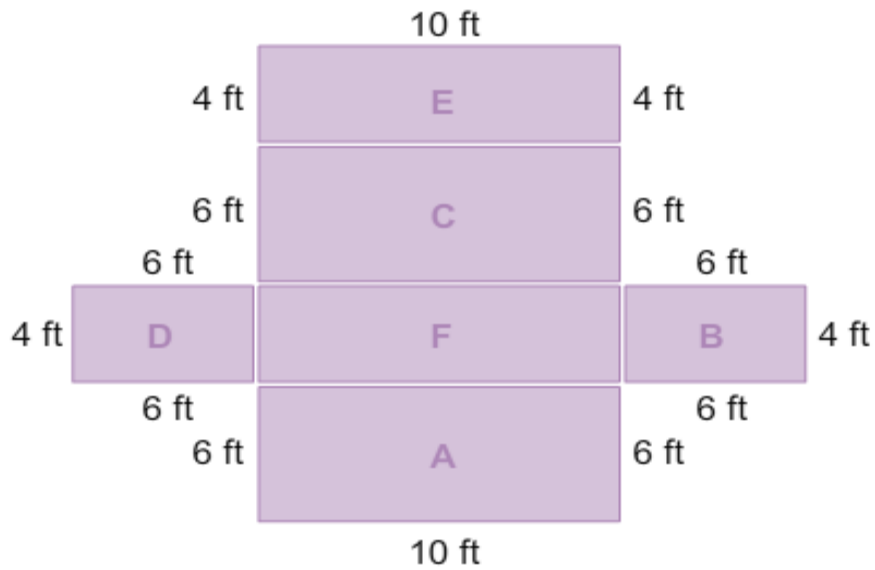
= ☐ cm^2

Check

Quick Check

A square pyramid has a base area of 25 cm squared. Each Triangular face has an area of 16 cm squared. What is the surface area?

A. 89 cm sq.

B. 41 cm sq.

C. 124 cm sq

D. 400 cm sq.

surface area = base area + total area of triangular faces

A rectangular prism is made up of three pairs of congruent rectangular faces.
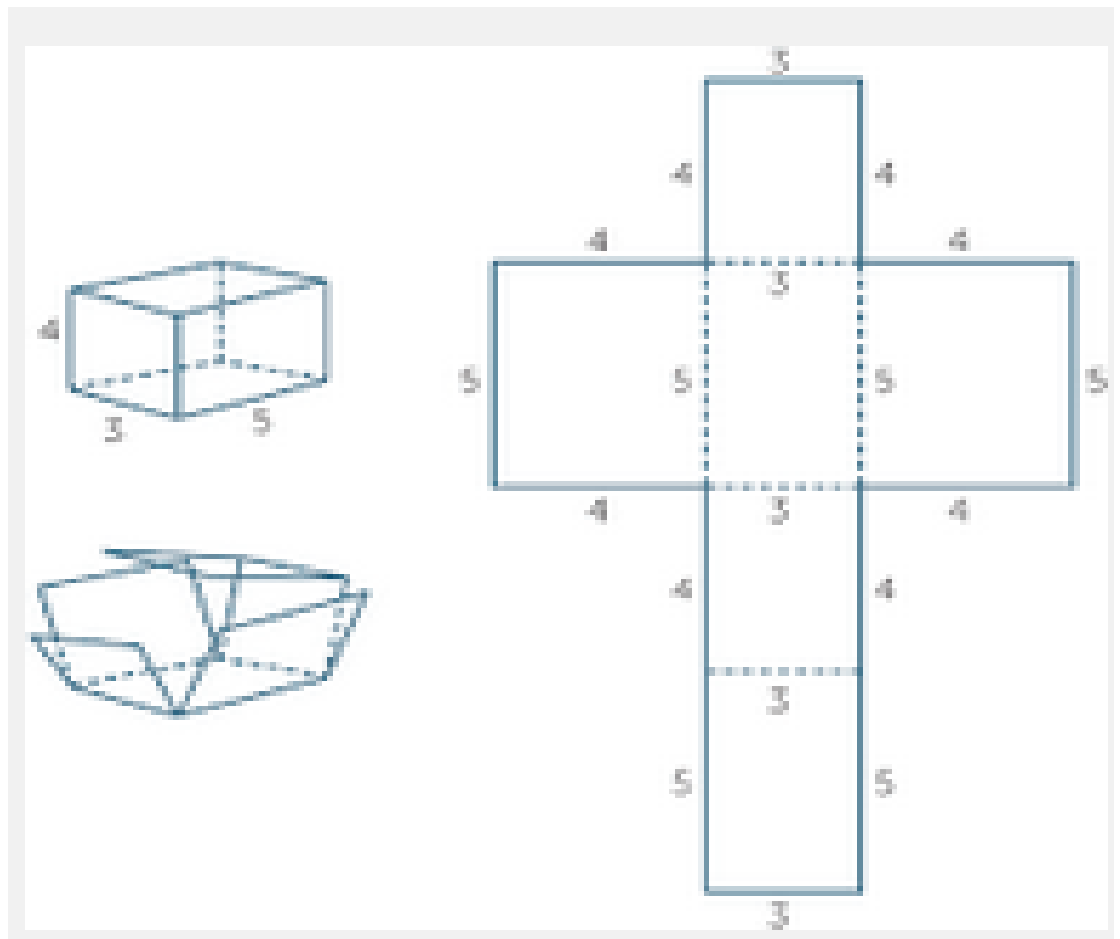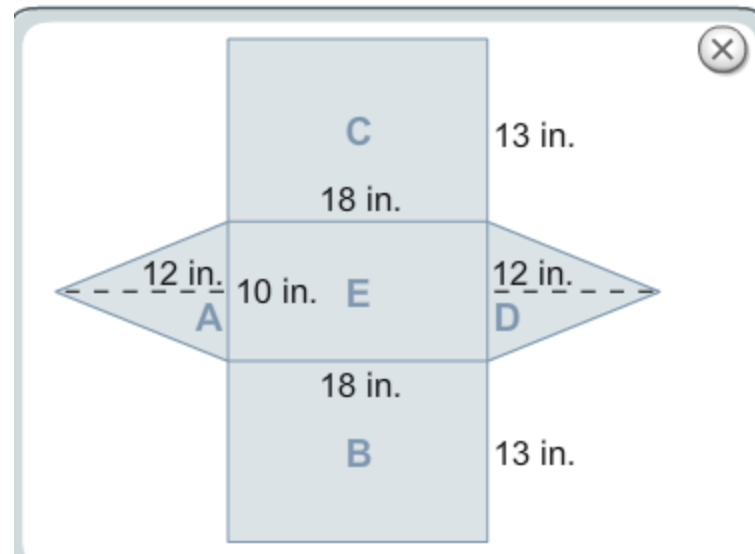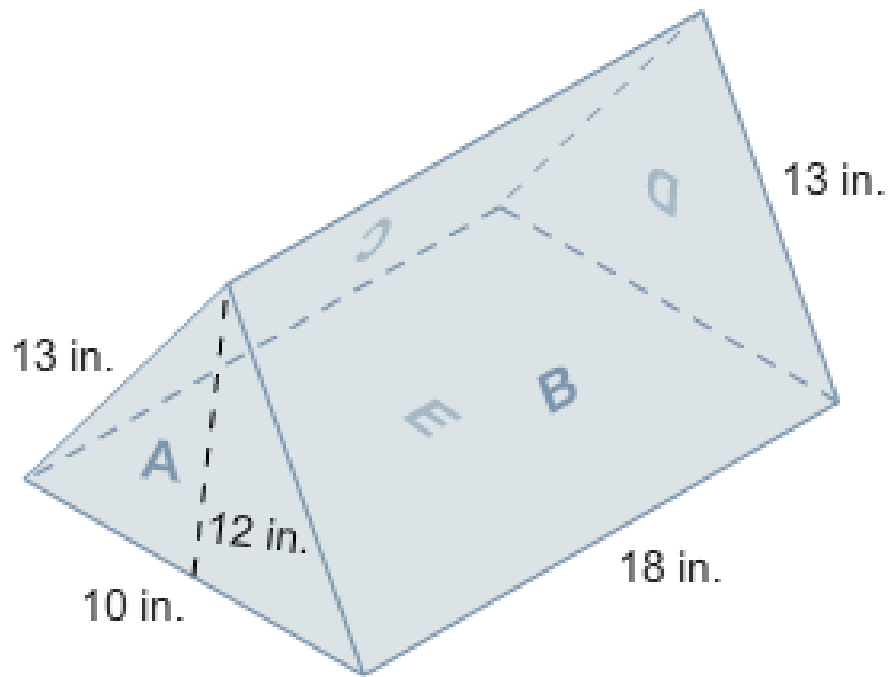Click the play arrow to learn more.

10 ft

4 ft   E   4 ft

6 ft   C   6 ft

6 ft   6 ft

4 ft   D   F   B   4 ft

6 ft   6 ft

6 ft   A   6 ft

10 ft

Face A } congruent
Face C

Face B } congruent
Face D

Face E } congruent
Face F

Quick Check:
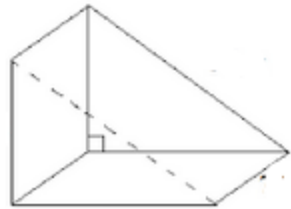
- What is the surface area of this rectangular prism?

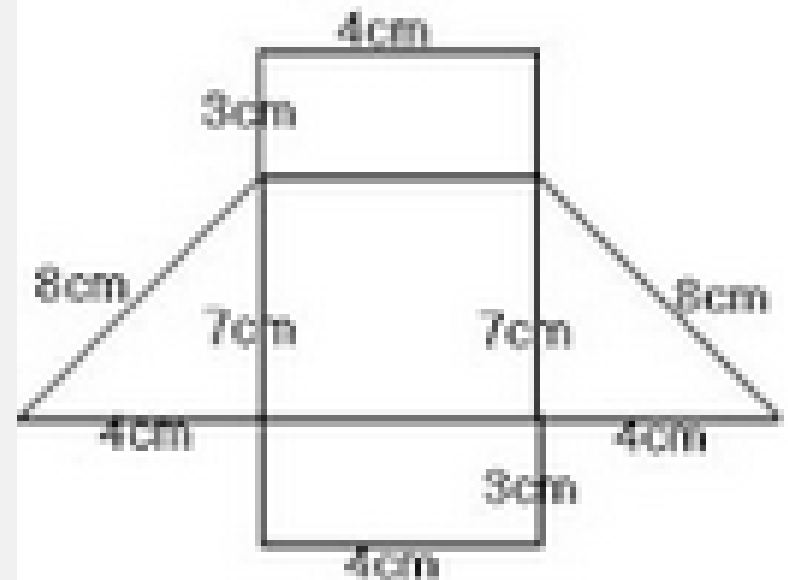A. 47 units sq

B. 94 units sq

C. 77 units sq

D. 39 units sq

13 in.

13 in.

2

0

A

B

E

12 in.

10 in.

18 in.

C   13 in.

18 in.

12 in.   10 in.   E   12 in.
A   D

18 in.

B   13 in.

Quick Check

- What is the surface area of this triangular prism?

A.

B.

C.

D.

QUESTIONS?

Homework:

STUDY!!!!!!

YOU HAVE A TEST TOMORROW

STUDY!!!!!!