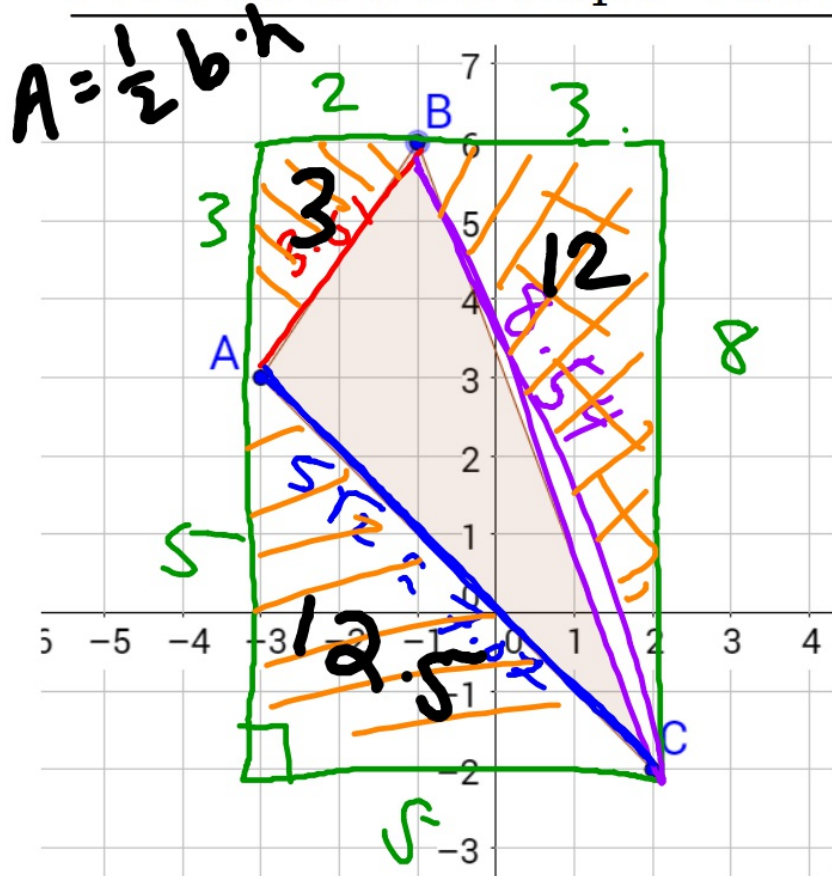


Good afternoon: staple warm up to notebooks.



1 Find the perimeter of  $\triangle ABC$  19.2

2 Find the area of  $\triangle ABC$  12.5

total:  $8 \times 5 = 40$

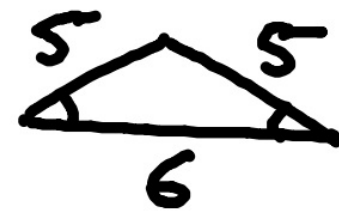
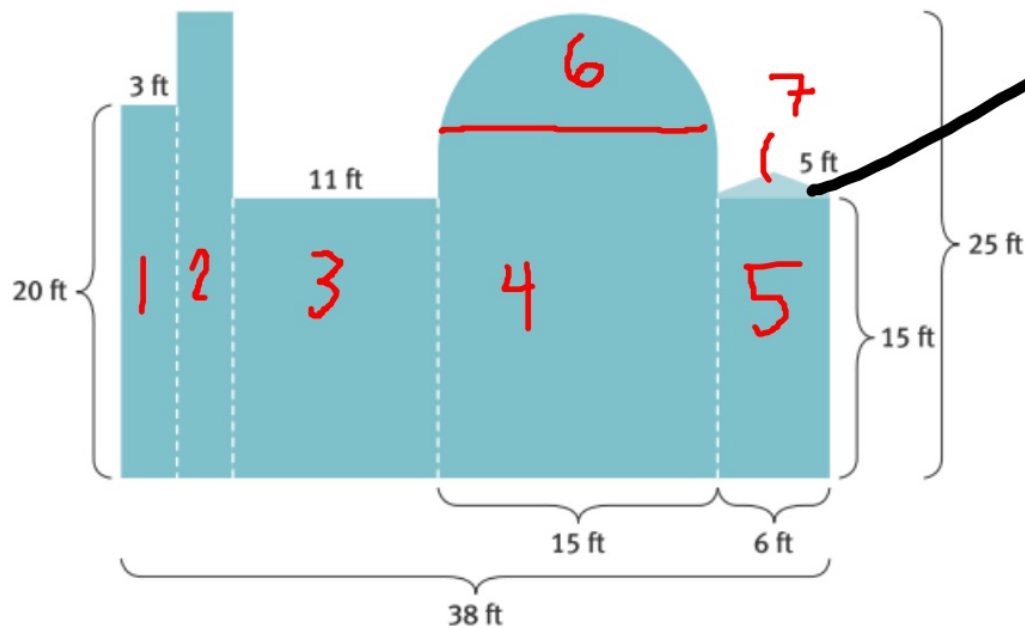
$$\begin{array}{r} -27.5 \\ \hline 12.5 \end{array}$$

Reminders: Reassess in DS Thu/Fri  
Tutoring tomorrow 4-5p

Some students are building the stage set for an upcoming school play. As they finalize some of the backdrops, they need to determine the budget for the cost of materials. The paint costs \$12.50 per gallon, and one gallon of paint covers 350 square feet. Reflecting tape costs \$4.50 per roll, and one roll of tape covers 40 linear feet.

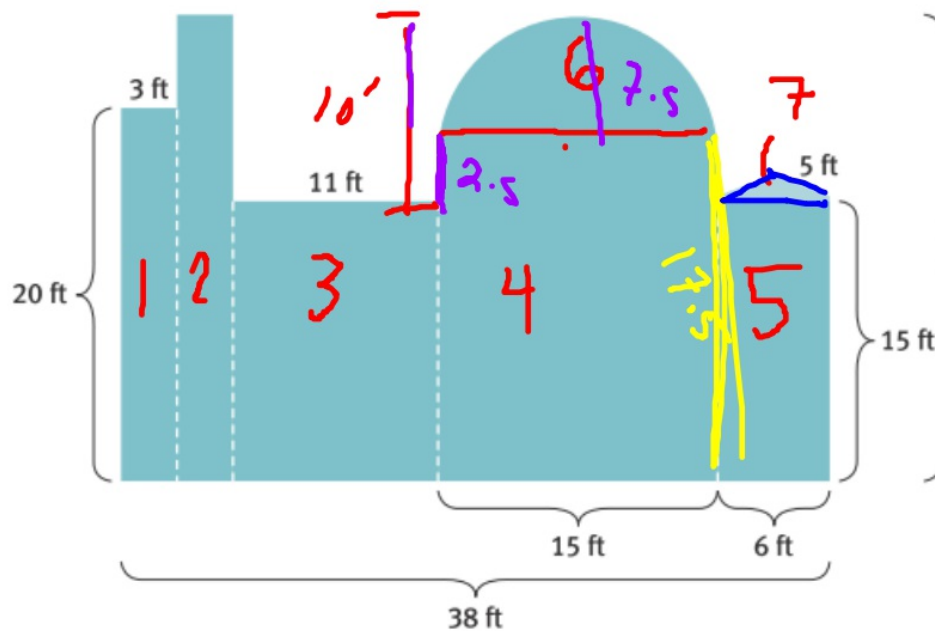
- The wooden backdrop for the opening scene shows a city skyline. One side of the backdrop is to be painted black. Find the area of the skyline. Then determine the budget for black paint if the backdrop is to be painted with two coats of paint.

$$\begin{array}{r} P477 \\ \hline \#1 \end{array}$$



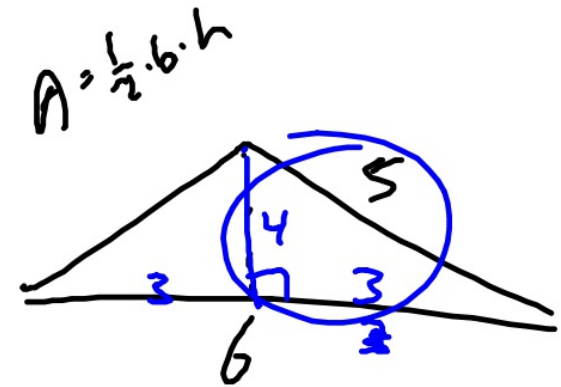
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- The wooden backdrop for the opening scene shows a city skyline. One side of the backdrop is to be painted black. Find the area of the skyline. Then determine the budget for black paint if the backdrop is to be painted with two coats of paint.



- |   |                             |
|---|-----------------------------|
| 1 | 60 ft <sup>2</sup>          |
| 2 | 75 ft <sup>2</sup>          |
| 3 | 165 ft <sup>2</sup>         |
| 4 | <u>262.5 ft<sup>2</sup></u> |
| 5 | 90 ft <sup>2</sup>          |
| 6 | 88.36 ft <sup>2</sup>       |
| 7 | 12 ft <sup>2</sup>          |

Total:  
752.86 sq ft



1505.72 sq ft paint

5 gallons needed

**\$62.50**

## Practice with Volume

(this problem is on back of  
'coordinate review' handout)

An ice box has dimensions  $12 \times 24 \times 16$  inches. It is full of shaved ice for snow cones. Each paper cone cup has a radius of 1.5 inches and a height of 5 inches. Assuming the ice does not melt and that each cup is filled completely, about how many cups can be filled?

$$V_{\text{cone}} = \frac{1}{3} \pi r^2 \cdot h$$

$$V_{\text{Box}} = l \cdot w \cdot h$$

Private think/work time

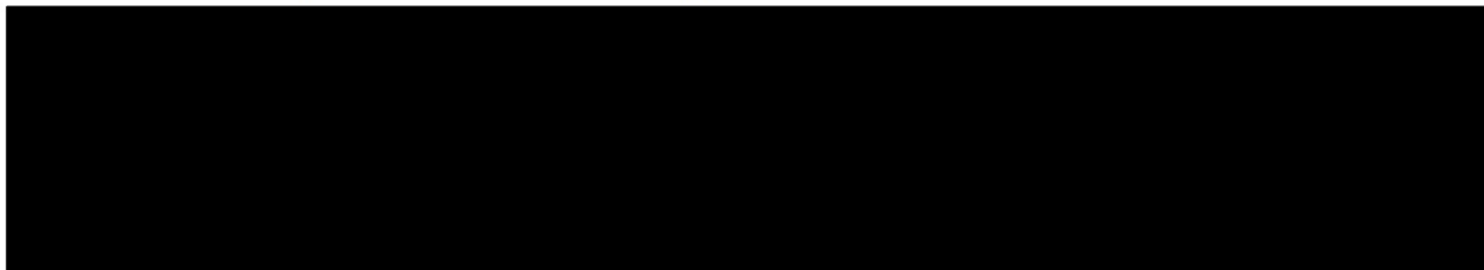
Interpret and Compare

Switch work with elbow partner, silently read over work

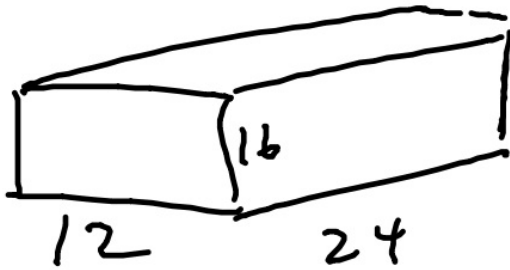
Person A describes B's reasoning, B clarifies

Person B describes A's reasoning, A clarifies

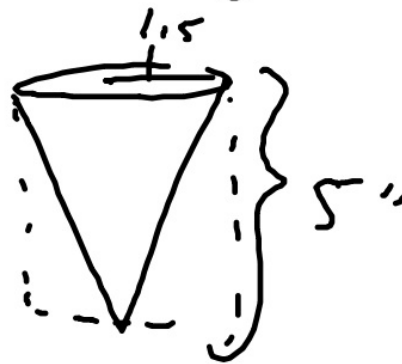
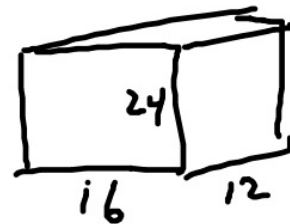
Return work, continue working if needed



An ice box has dimensions  $12 \times 24 \times 16$  inches. It is full of shaved ice for snow cones. Each paper cone cup has a radius of 1.5 inches and a height of 5 inches. Assuming the ice does not melt and that each cup is filled completely, about how many cups can be filled?



$$V = 12 \cdot 24 \cdot 16$$
$$V = 4608 \text{ in}^3$$



$$V = \frac{1}{3} \pi (1.5)^2 \cdot 5$$

$$V = 11.78 \text{ in}^3$$

$$\frac{4608}{11.78} = 391.17$$

To provide runners with water during a race, organizers are using 5" tall cylindrical cups with diameter 2.5". The water coolers they have hold 800 cubic inches of water each. If there are 120 runners and each runner gets 2 cups of water, how many coolers will the organizers need to have?

$$V = \pi r^2 \cdot h$$

Private think time

Listen and Compare

Person A describes their process, Person B listens silently, asks q's at the end

Person B describes their process, Person A listens silently, asks q's at the end





To provide runners with water during a race, organizers are using 5" tall cylindrical cups with diameter 2.5". The water coolers they have hold 800 cubic inches of water each. If there are 120 runners and each runner gets 2 cups of water, how many coolers will the organizers need to have?



$$V = \pi(1.25)^2 \cdot 5$$
$$V_c = 24.54 \text{ in}^3 \text{ (1 cup)}$$

$$\frac{\times 240}{5890.5 \text{ in}^3}$$
$$\cdot 800 = 7.36$$

7.36 → 8 coolers

Share with your face partner something  
you've learned today.



What are the first questions that come to mind?



How much would it cost to give our classroom a coin carpet with pennies?



Write down your best guess.

Information you need?

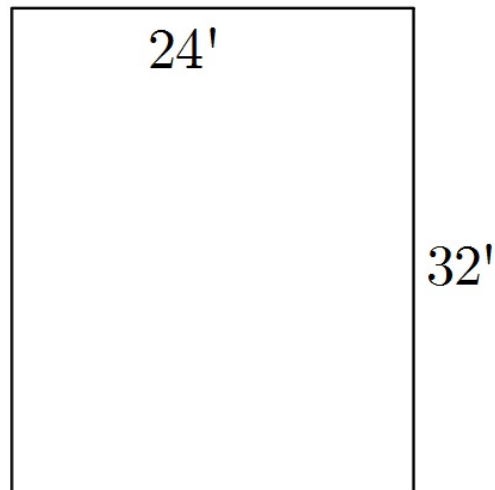
Cost for coin carpet?



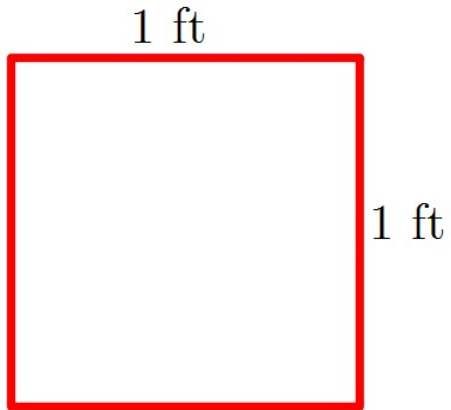
Penny diameter: 1.905 cm

Classroom dimensions: 32 feet by 24 feet

1 inch = 2.54 cm  
1 foot = 12 inches





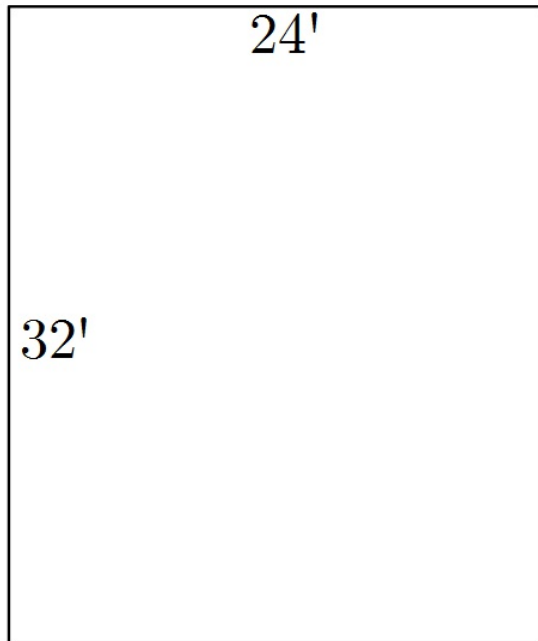


$$1 \text{ ft} = 12 \text{ in}$$
$$1 \text{ ft}^2 \neq 12 \text{ in}^2$$

$1 \text{ inch} = 2.54 \text{ cm}$ $1 \text{ foot} = 12 \text{ inches}$
---

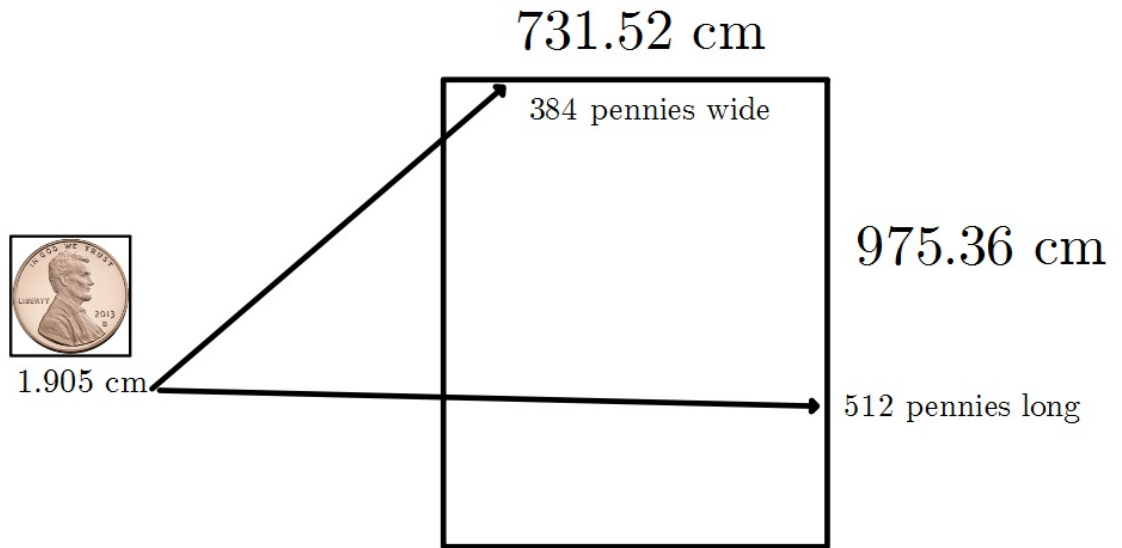
If u convert linear units to linear units before calculating area, u maintain dimension and proportion





Convert room measurement to cm

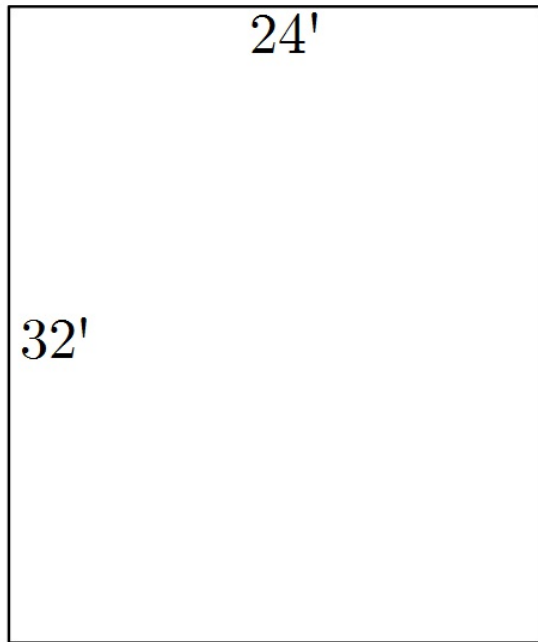
24' x 32' → 288in x 384in → 731.52 cm x 975.36 cm



Pennies needed:  $384 * 512 = 196608$

Dollars: \$1966.08





Convert room measurement to cm

$$24' \times 32' \longrightarrow 288\text{in} \times 384\text{in} \longrightarrow 731.52 \text{ cm} \times 975.36 \text{ cm}$$

Area of room in  $\text{cm}^2$   
 $713,495.347 \text{ cm}^2$



effective area  
 $3.629 \text{ cm}^2$

$$\frac{713,495.347 \text{ cm}^2}{3.629 \text{ cm}^2}$$

1.905cm

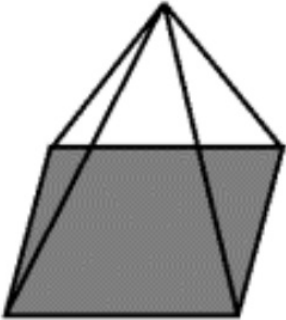
Convert mm to cm

$$19.05 \text{ mm} \longrightarrow 1.905 \text{ cm}$$

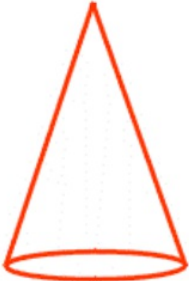
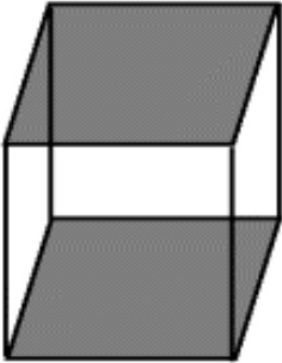
196609.354 pennies

**\$1966.09**

Let's talk about Pyramids!

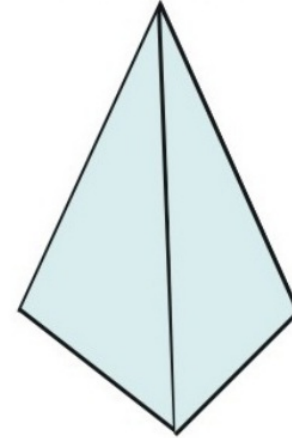
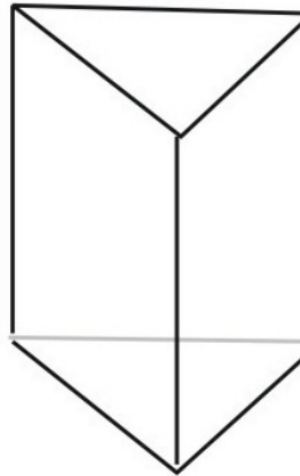


Rectangular Prism (box)  
Cylinder  
Pyramid





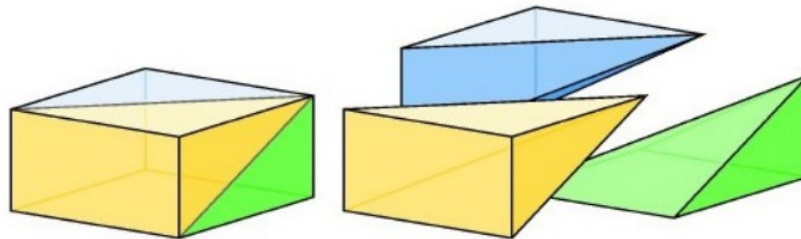
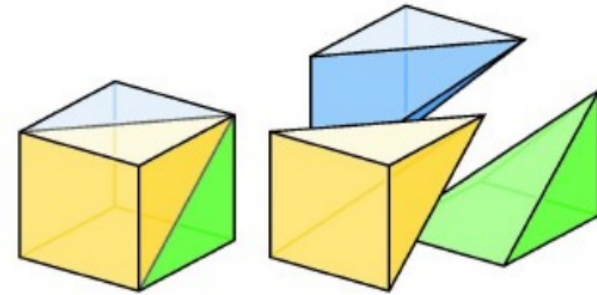
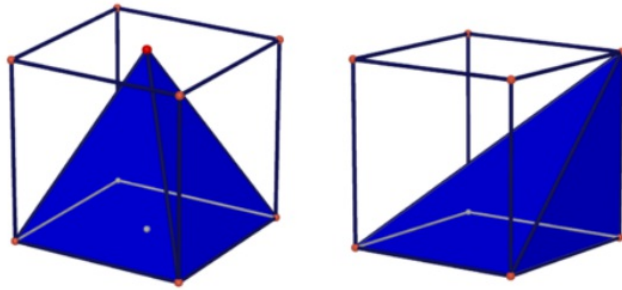
ACHTUNG!!



One of these is NOT a pyramid!

Prism vol: Base Area \* height

Pyramid vol:  $\frac{1}{3}$  Base Area \* height )



<https://www.youtube.com/watch?v=OUDjY6vJ8pw>

Homework

p 506 #10-12

p. 517 #14, 16, 18

→ Study formulas \* \*

Assessment on Monday

