

# Interpenetrations

## EGD Grade 11 & 12 (Revision)

Developed by: PC Viljoen

Senior Educational Specialist for  
Engineering Graphics and Design

Free State Province

# Interpenetrations

## Method 2: If branch is slanted

### Question 2: Interpenetration

#### Given:

- \* The incomplete front view and top view of an equilateral triangular prism on  $30^\circ$  that has to fit around a square prism. The axes of both prisms lie in a common vertical plane
- \* An auxiliary view of the triangular prism

#### Instructions:

Draw, to scale 1:1, the following:

1. The given top view.
2. The complete front view clearly showing the curve of interpenetration.
3. The complete left view.

- \* Show ALL hidden detail.
- \* Show ALL necessary construction.

#### Question 2: Interpenetration

##### Given:

\* The incomplete front view and top view of an equilateral triangular prism on  $30^\circ$  that has to fit around a square prism. The axes of both prisms lie in a common vertical plane

\* An auxiliary view of the triangular prism

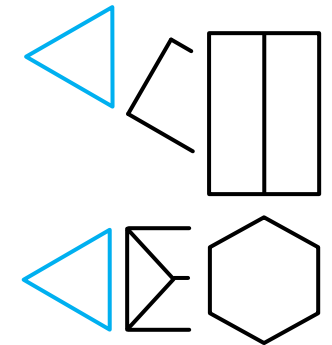
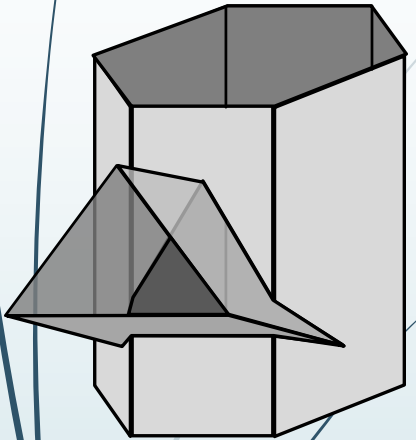
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Draw, to scale 1:1, the following:

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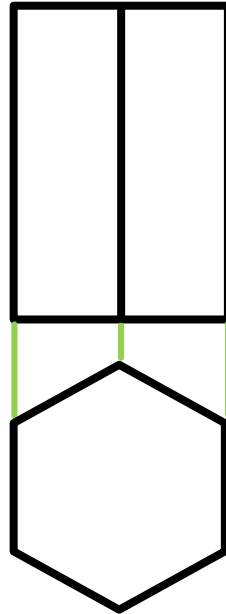
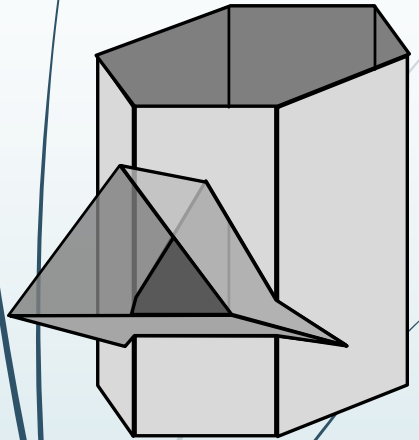
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# Interpenetrations

Step 1



## Question 2: Interpenetration

### Given:

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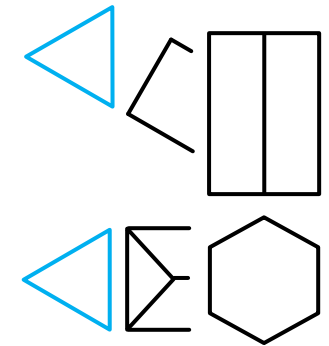
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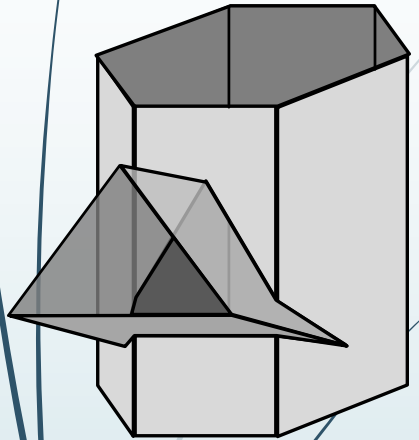


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# Interpenetrations

Step 2



**Question 2: Interpenetration**  
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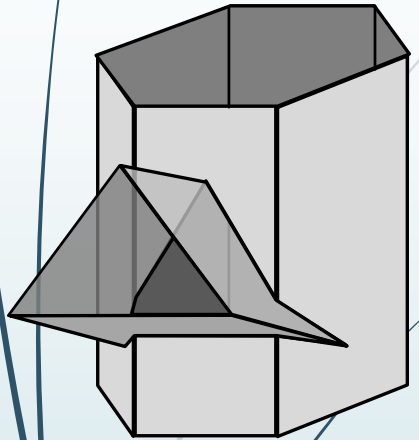


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# Interpenetrations

Step 3



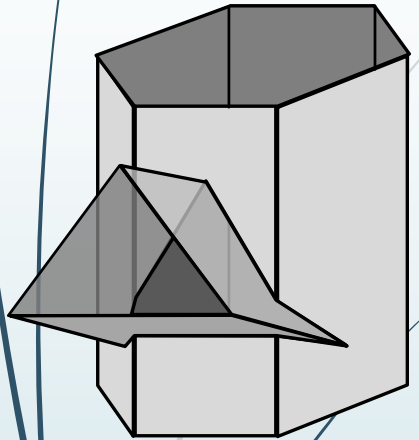
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# Interpenetrations

Step 4

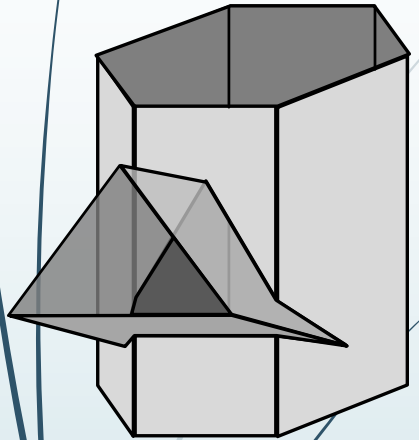


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# Interpenetrations

Step 5

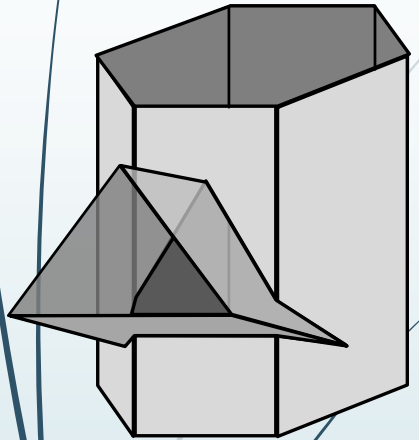


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# Interpenetrations

Step 6



**Question 2: Interpenetration**  
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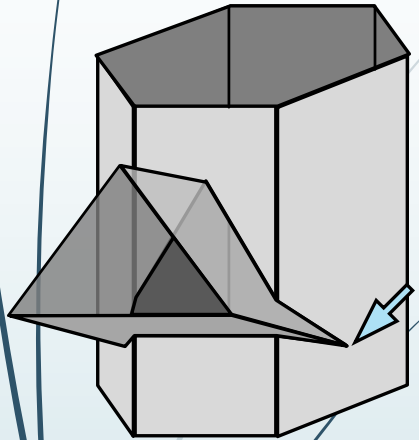


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Step 7

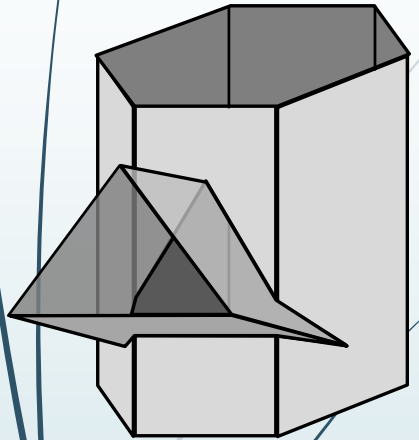


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# Interpenetrations

Step 8



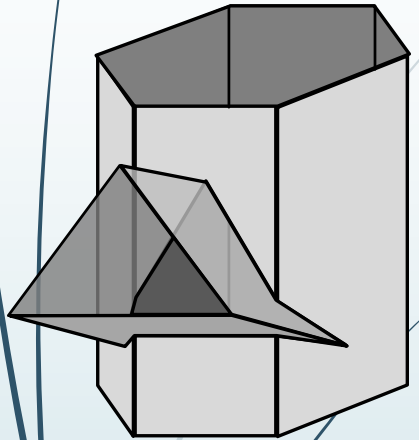
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# Interpenetrations

Step 9

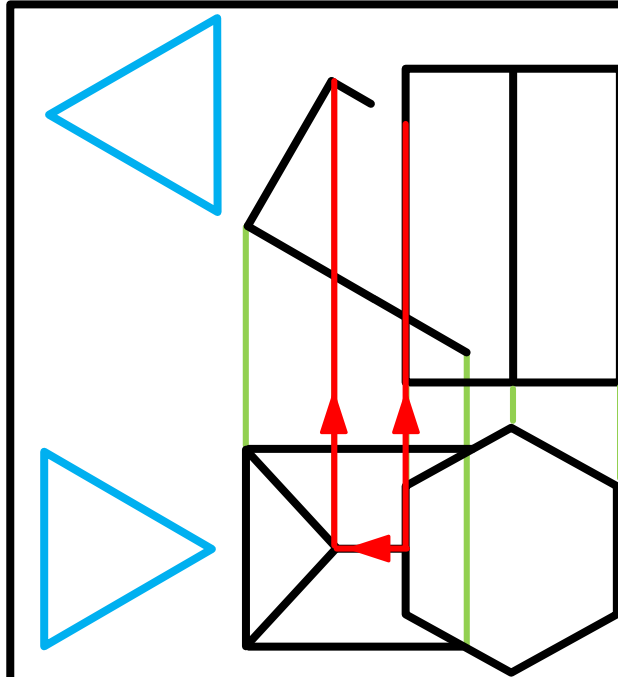
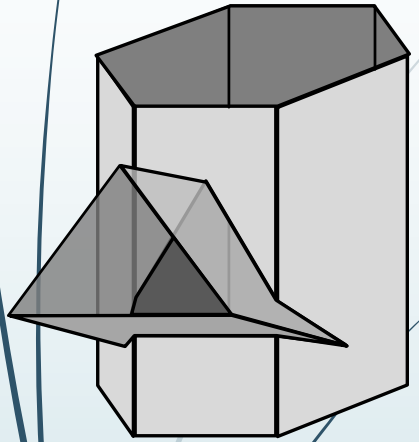


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# Interpenetrations

Step 10



## Question 2: Interpenetration

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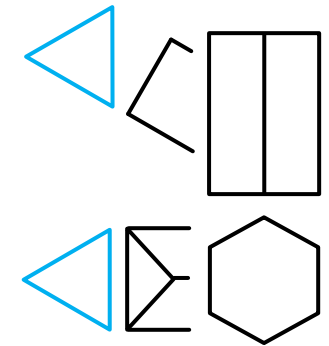
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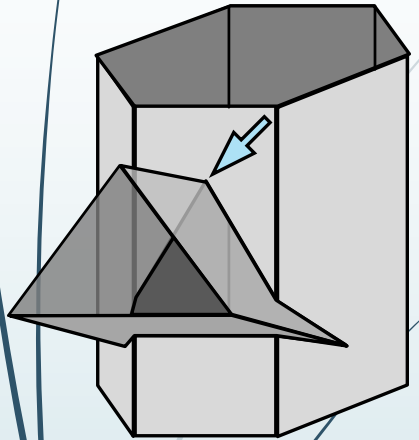


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# Interpenetrations

Step 11

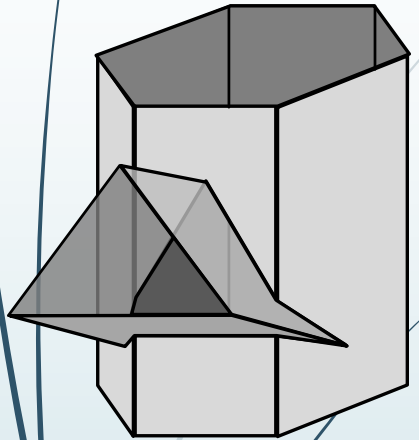


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# Interpenetrations

Step 12

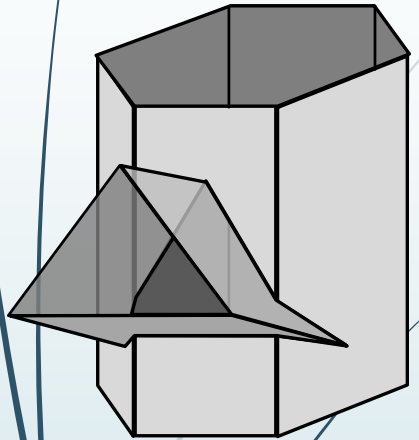


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# Interpenetrations

Step 13



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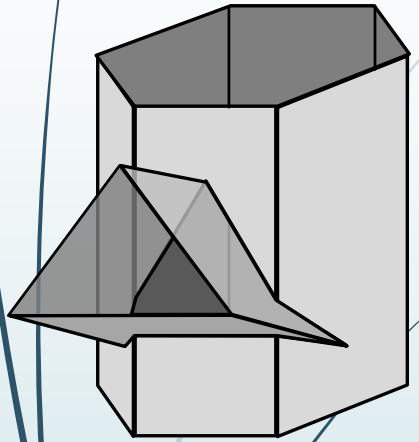


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# Interpenetrations

Step 14

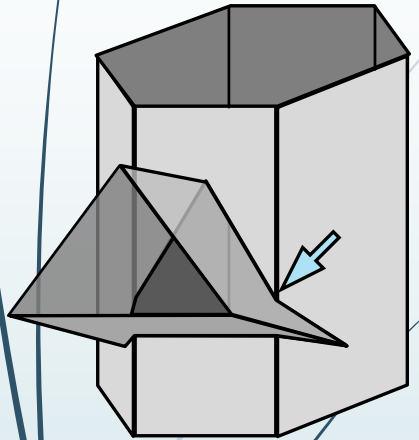


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# Interpenetrations

Step 15

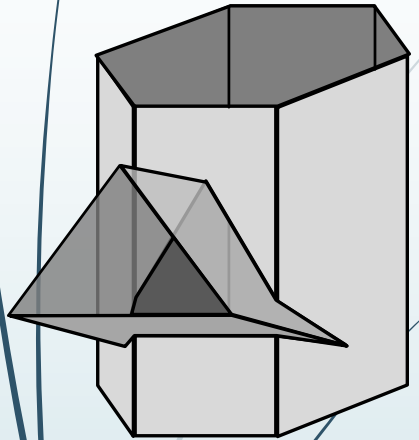


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# Interpenetrations

Step 16

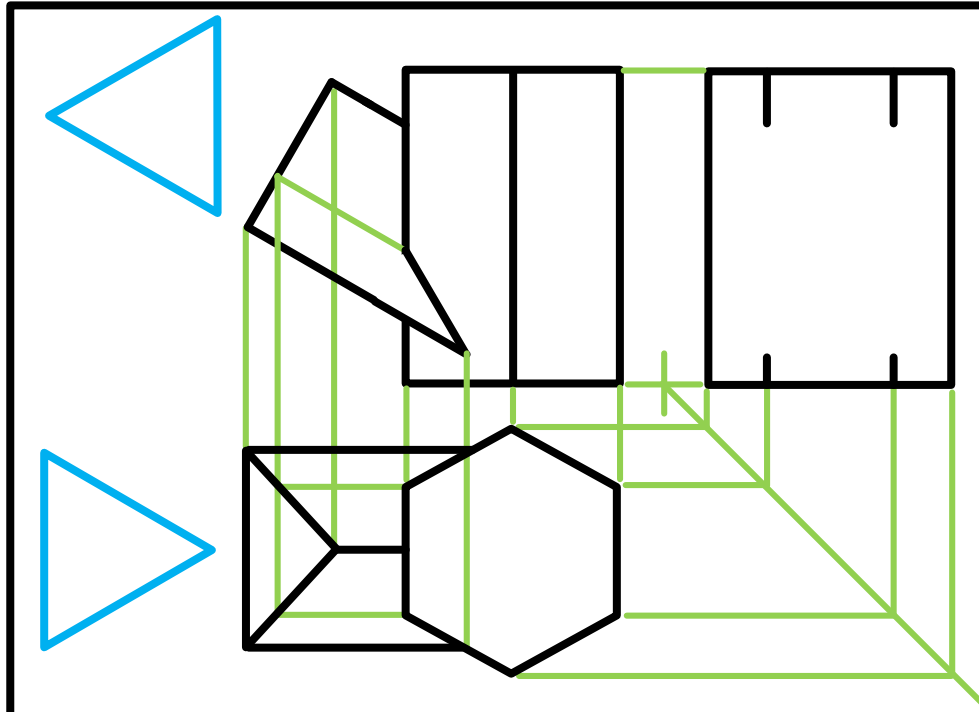
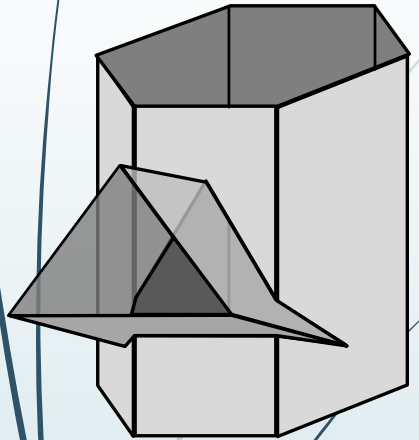


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# Interpenetrations

Step 17



## Question 2: Interpenetration

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\* An auxiliary view of the triangular prism

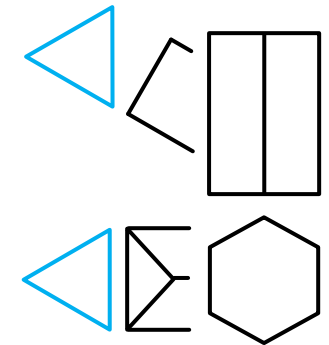
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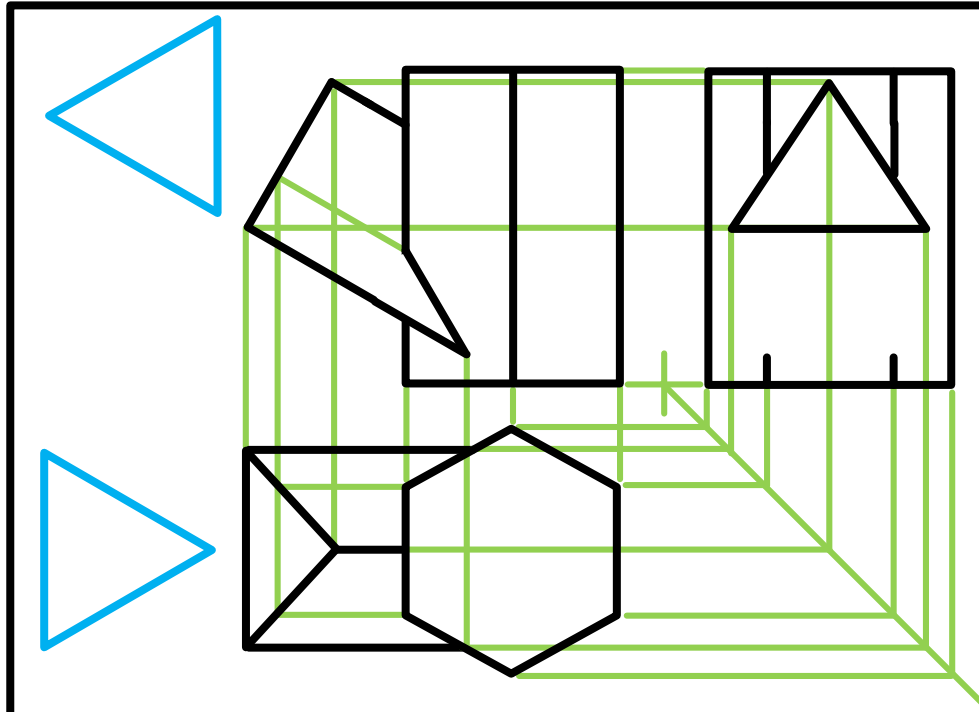
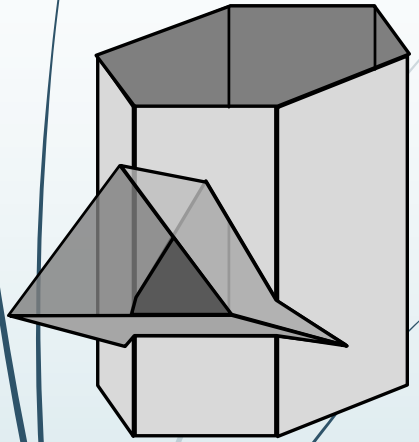


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# Interpenetrations

Step 18



### Question 2: Interpenetration

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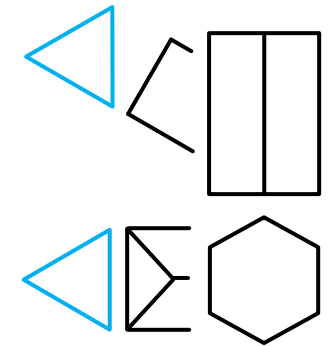
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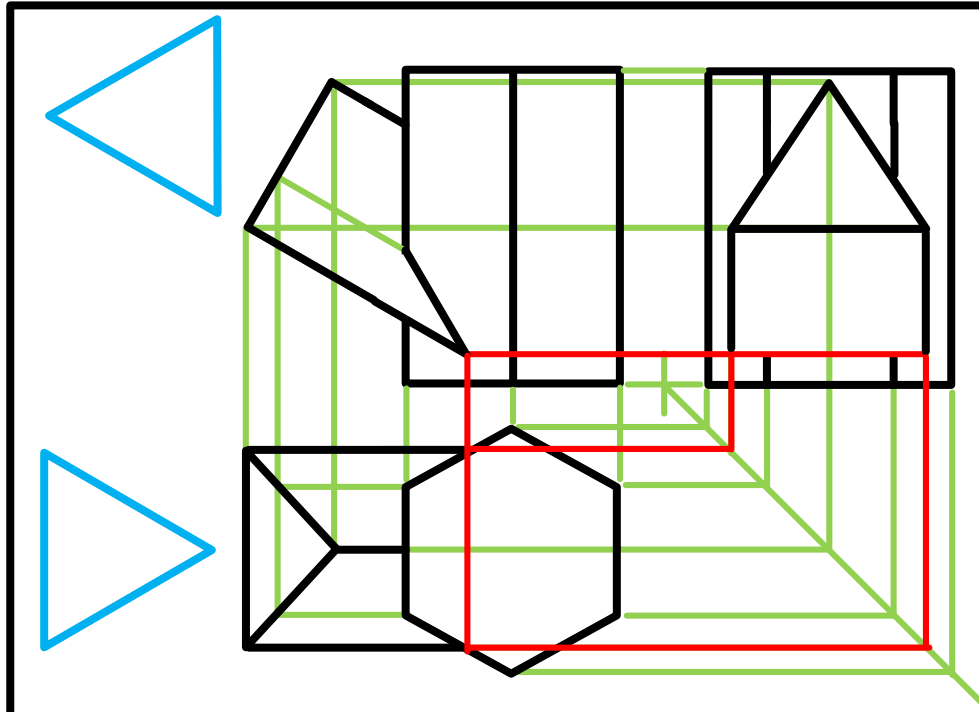
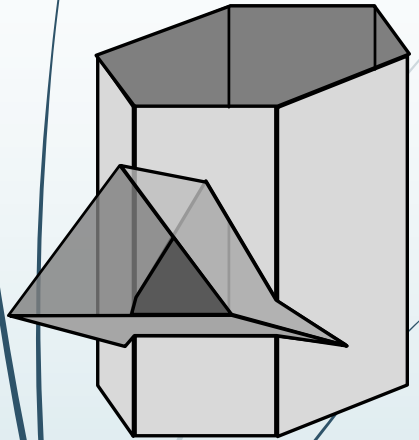


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# Interpenetrations

Step 19



## Question 2: Interpenetration

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\* An auxiliary view of the triangular prism

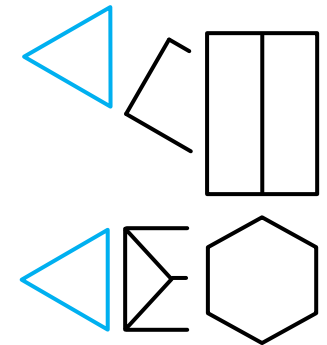
### Instructions:

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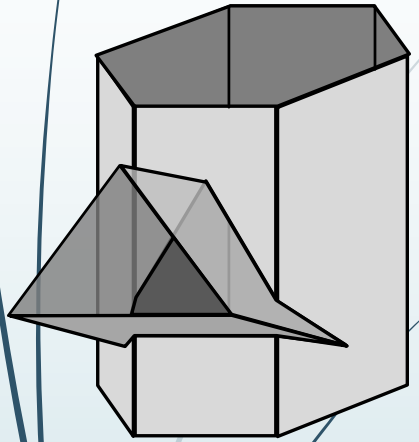


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# Interpenetrations

Step 20

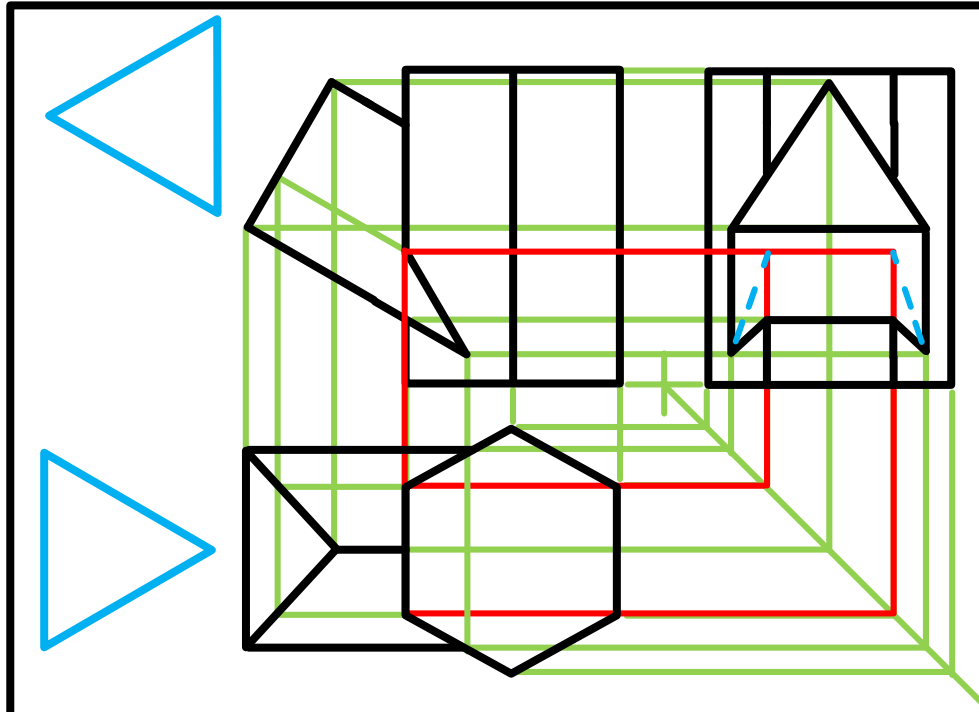
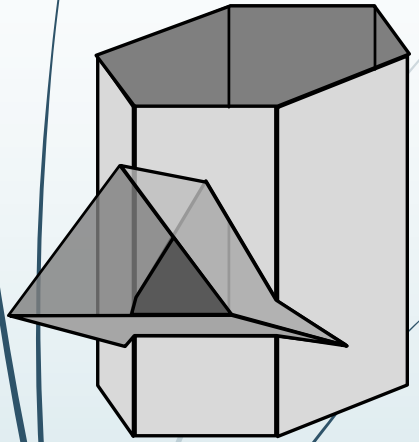


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# Interpenetrations

Step 21



### Question 2: Interpenetration

#### Given:

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\* An auxiliary view of the triangular prism

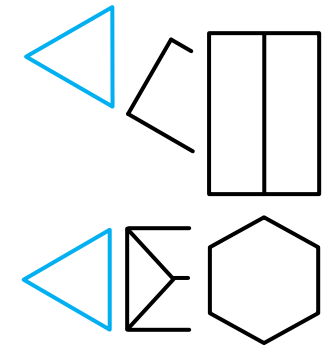
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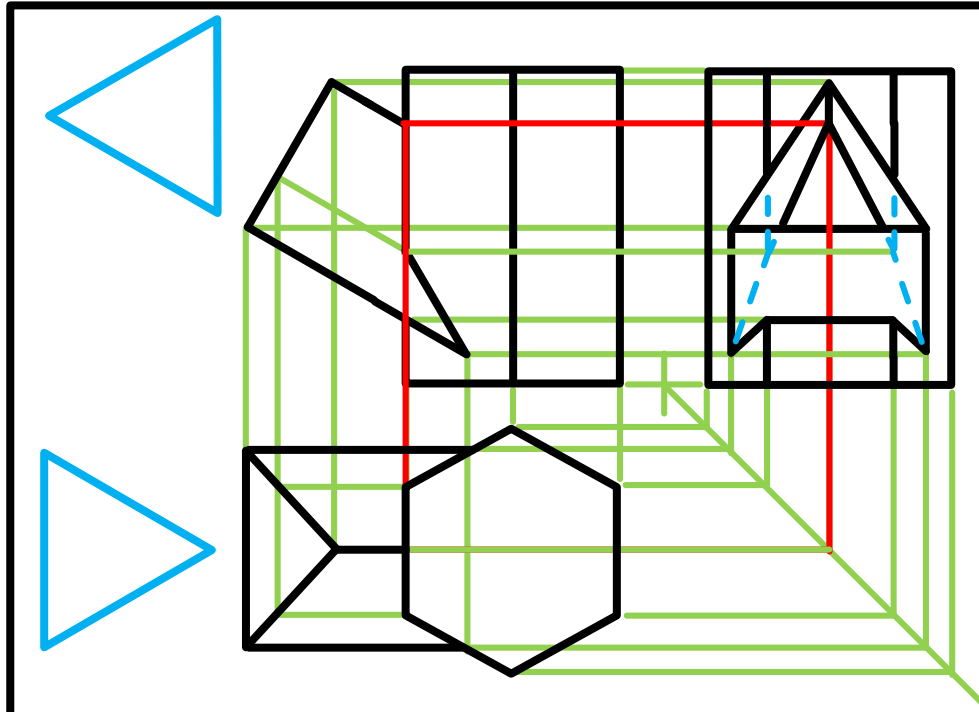
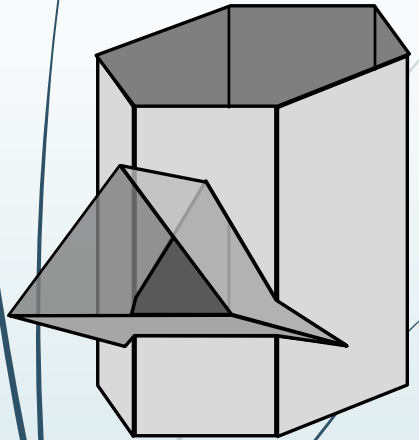


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# Interpenetrations

Step 22



## Question 2: Interpenetration

### Given:

\* The incomplete front view and top view of an equilateral triangular prism on  $30^\circ$  that has to fit around a square prism. The axes of both prisms lie in a common vertical plane

\* An auxiliary view of the triangular prism

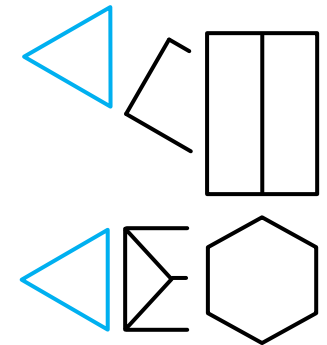
### Instructions:

Draw, to scale 1:1, the following:

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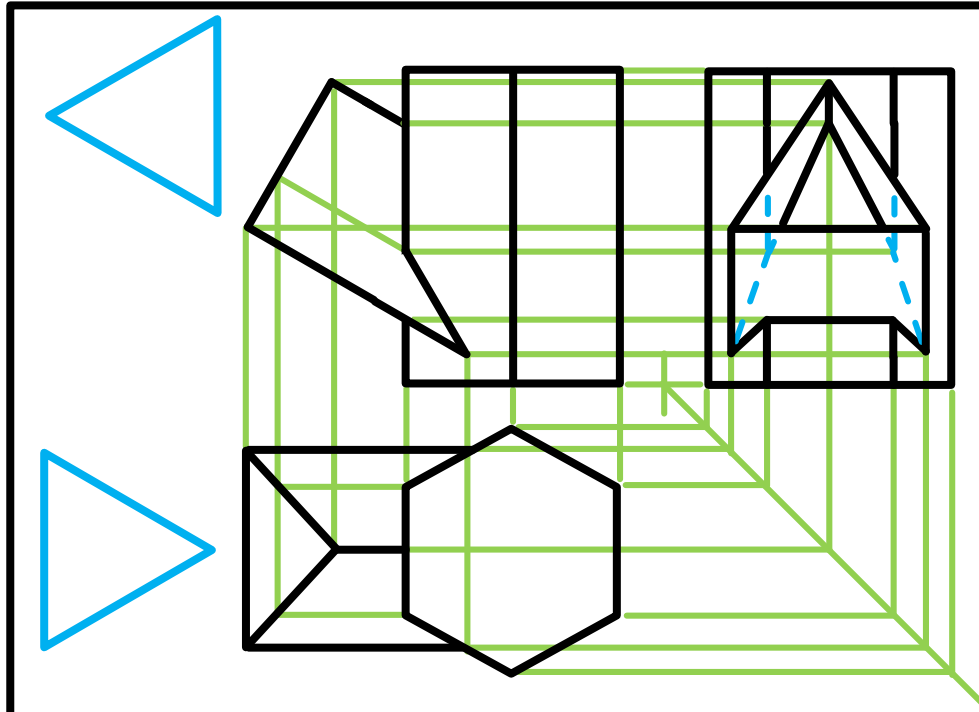
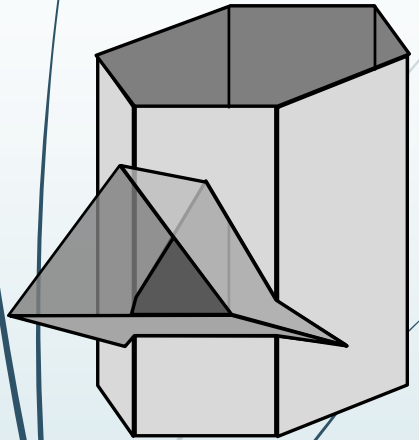


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# Interpenetrations

Step 23



## Question 2: Interpenetration

### Given:

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\* An auxiliary view of the triangular prism

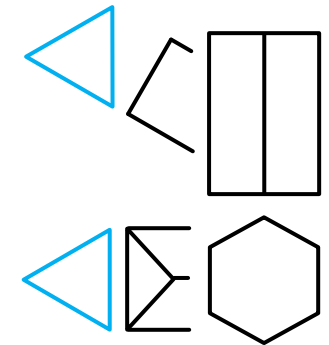
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