

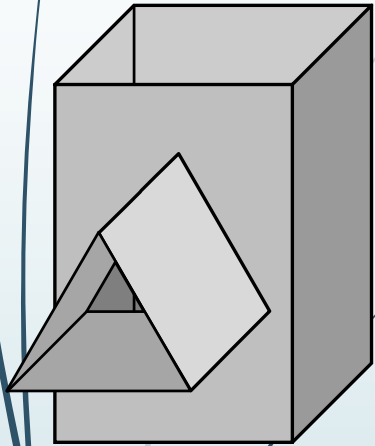
EGD Grade 11

Interpenetrations

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Free State Province

What is interpenetrations?



Question 2: Interpenetration

Given:

* The incomplete front view and top view of an equilateral triangular prism 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

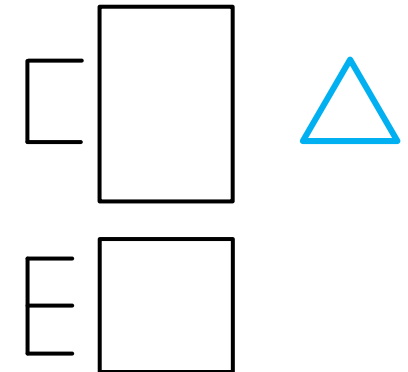
Instructions:

Draw, to scale 1:1, the following:

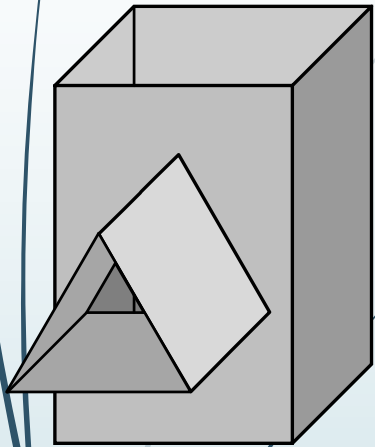
1. The given top view
2. The complete front view clearly showing the curve of interpenetration
1. The complete left view

* Show ALL hidden detail

* Show ALL necessary construction.



What is interpenetrations?



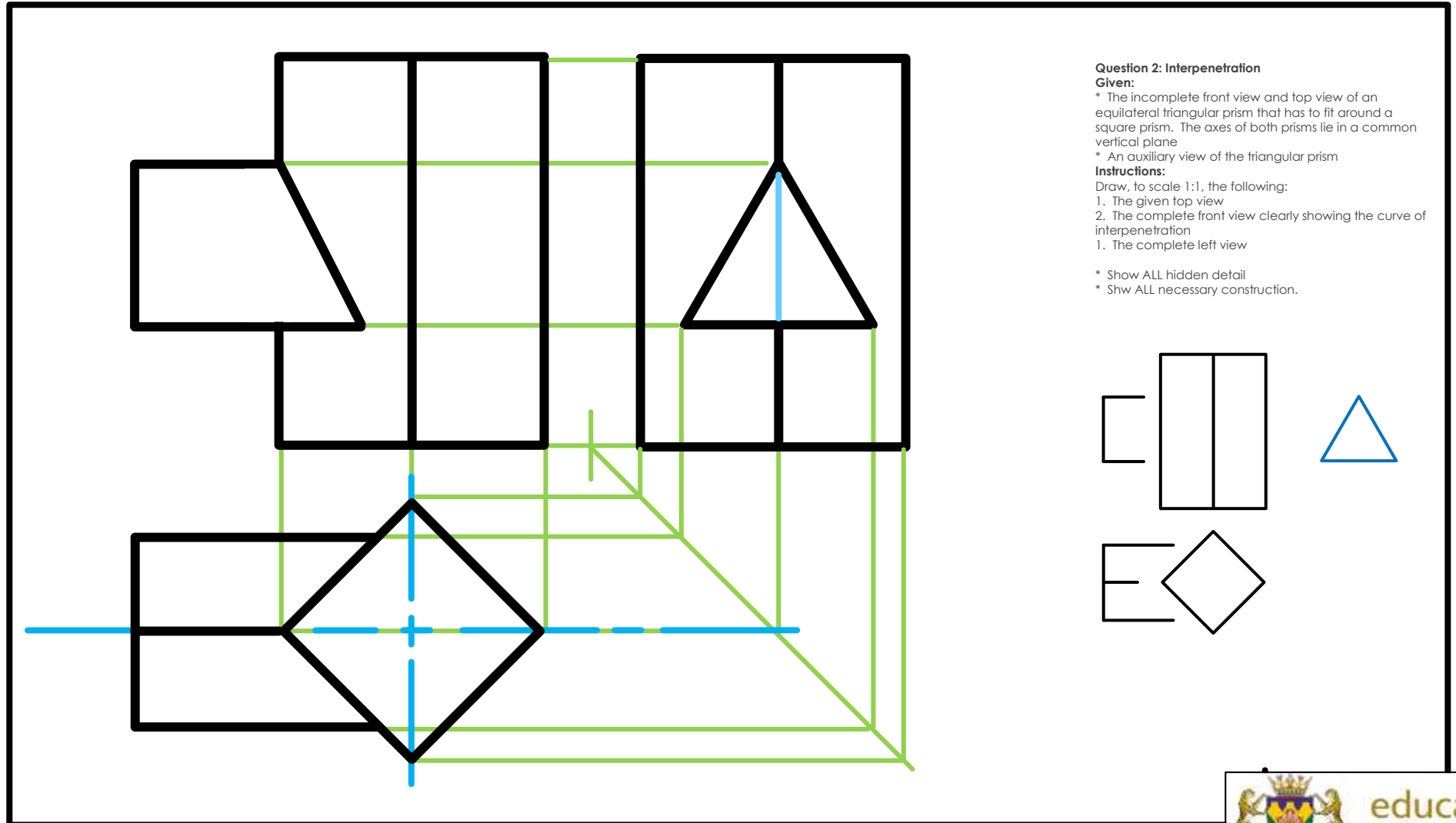
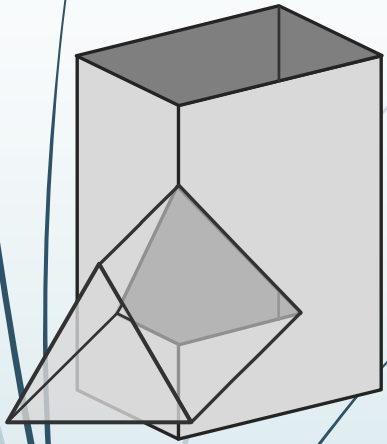
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The diagram shows three orthographic views of the interpenetrating prisms. The top view (top right) is a square with an equilateral triangle inside it. The front view (top left) is a square with a triangle inside it. The left view (bottom left) is a square with a triangle inside it. Green lines indicate the projection paths between the views. To the right of the main diagram, there are two auxiliary views: a top view of a square with a triangle inside, and a front view of a square with a triangle inside.



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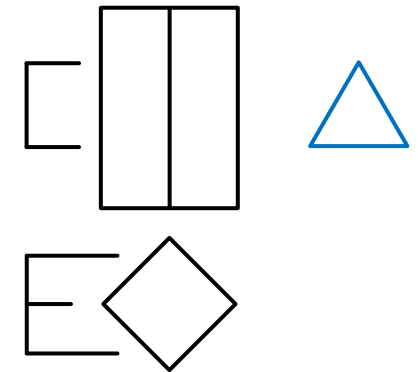
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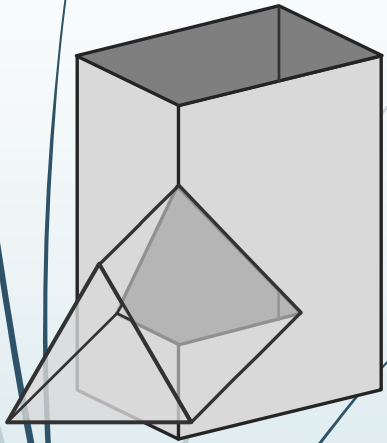
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What is interpenetrations?

Grade 11 content:
The curves of interpenetration
have to be symmetrical.



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What is interpenetrations?

Grade 12 content:
The curves of interpenetration
can be non-symmetrical.

