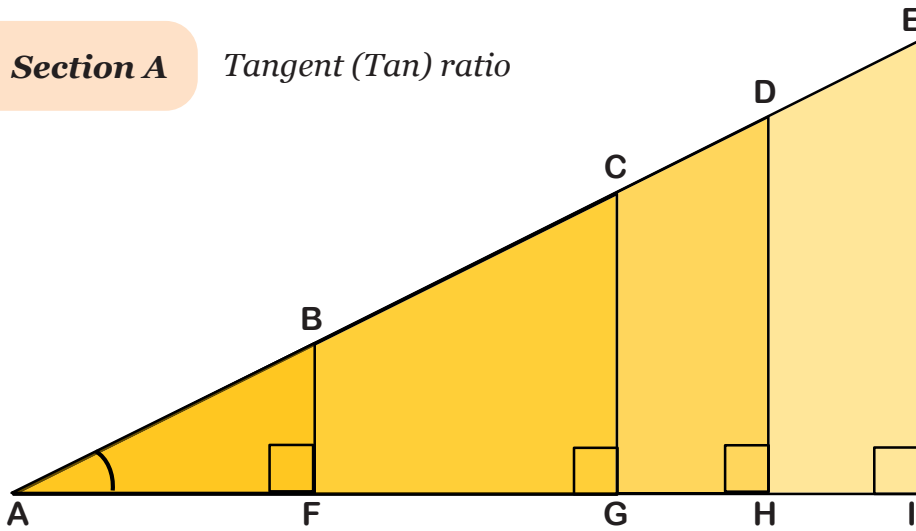


Discovering Trigonometry



Each triangle contains similar right angled triangles.
 Measure then divide the lengths given in each box.
 Leave all answers to 2 decimal places.

Section A Tangent (Tan) ratio

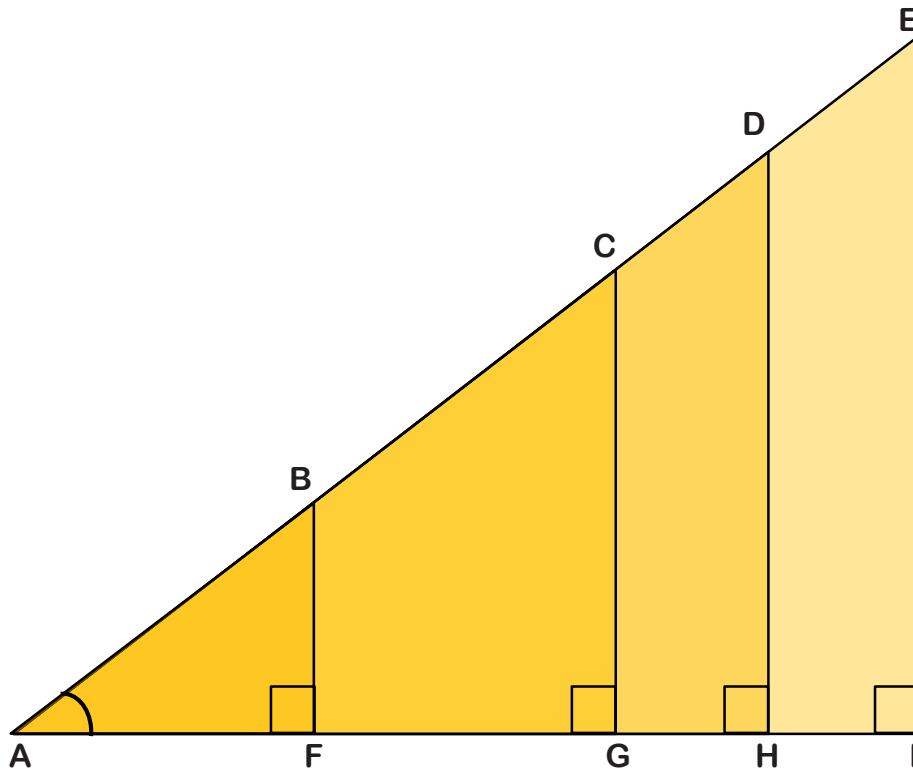


Angle BAF =

$\frac{BF}{AF} =$ $\frac{CG}{AG} =$

$\frac{DH}{AH} =$ $\frac{EI}{AI} =$

Tan ($\hat{B}AF$) =

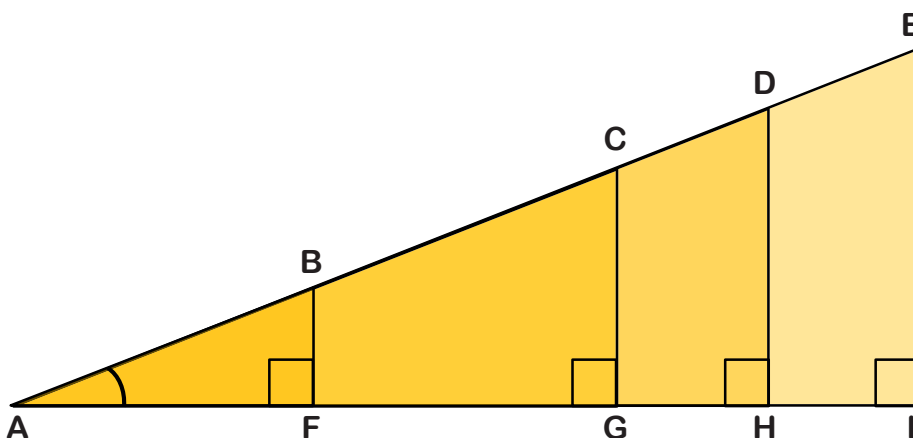


Angle BAF =

$\frac{BF}{AF} =$ $\frac{CG}{AG} =$

$\frac{DH}{AH} =$ $\frac{EI}{AI} =$

Tan ($\hat{B}AF$) =



Angle BAF =

$\frac{BF}{AF} =$ $\frac{CG}{AG} =$

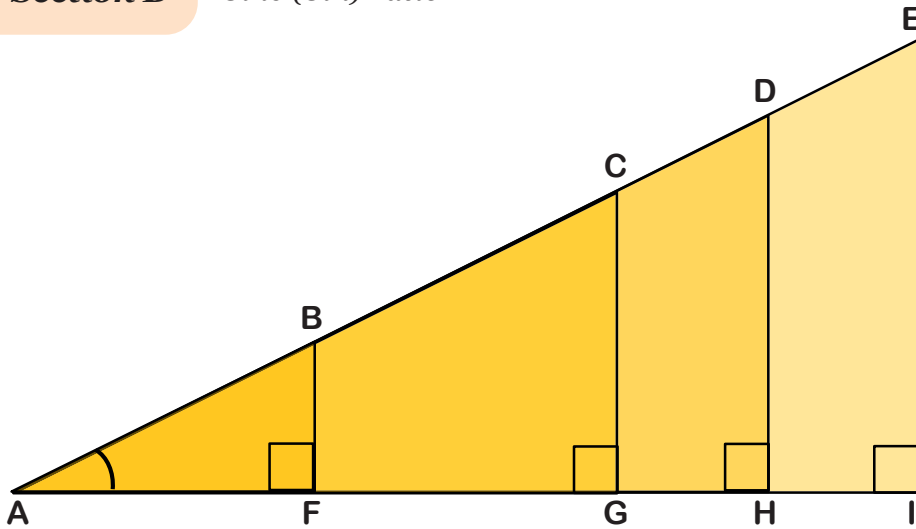
$\frac{DH}{AH} =$ $\frac{EI}{AI} =$

Tan ($\hat{B}AF$) =

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Section B Sine (Sin) ratio



Angle BAF =

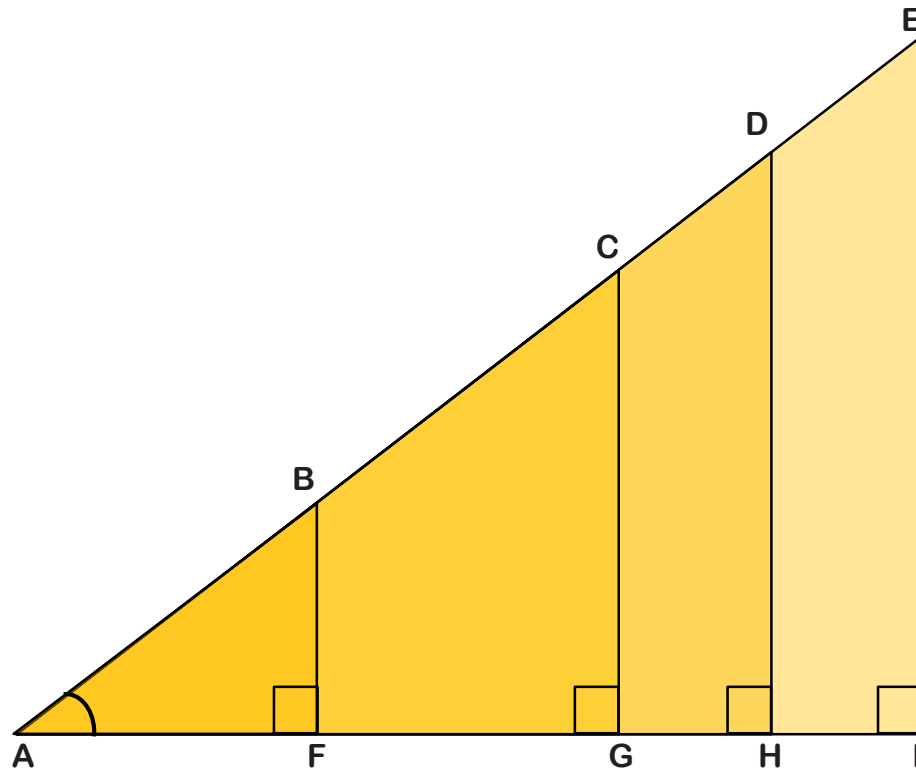
$$\frac{BF}{AB} = \text{$$

$$\frac{CG}{AC} = \text{$$

$$\frac{DH}{AD} = \text{$$

$$\frac{EI}{AE} = \text{$$

Sin ($\hat{B}AF$) =



Angle BAF =

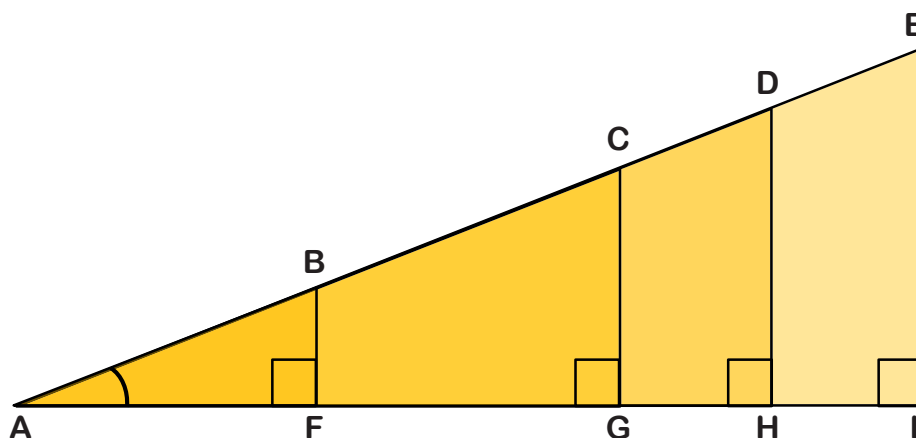
$$\frac{BF}{AB} = \text{$$

$$\frac{CG}{AC} = \text{$$

$$\frac{DH}{AD} = \text{$$

$$\frac{EI}{AE} = \text{$$

Sin ($\hat{B}AF$) =



Angle BAF =

$$\frac{BF}{AB} = \text{$$

$$\frac{CG}{AC} = \text{$$

$$\frac{DH}{AD} = \text{$$

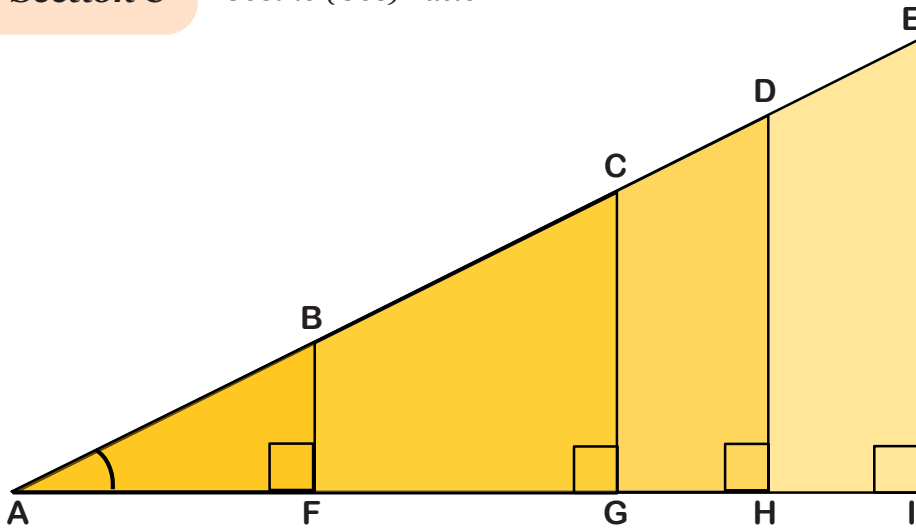
$$\frac{EI}{AE} = \text{$$

Sin ($\hat{B}AF$) =

Discovering Trigonometry



Section C Cosine (Cos) ratio



Angle BAF =

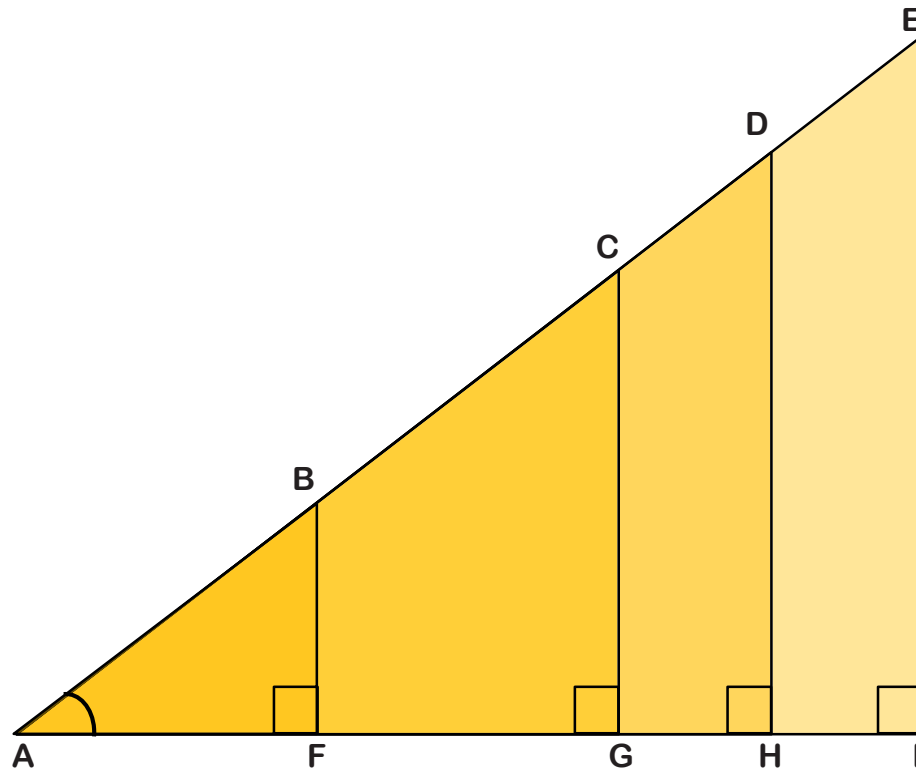
$$\frac{AF}{AB} =$$

$$\frac{AG}{AC} =$$

$$\frac{AH}{AD} =$$

$$\frac{AI}{AE} =$$

Cos ($\hat{B}AF$) =



Angle BAF =

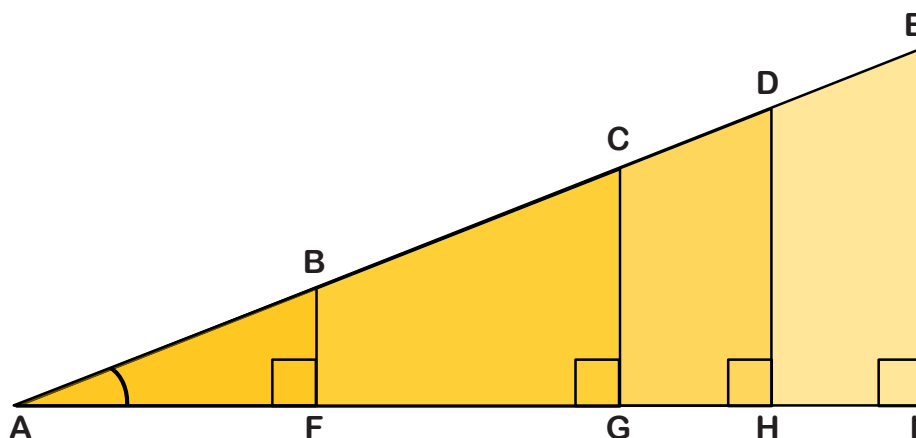
$$\frac{AF}{AB} =$$

$$\frac{AG}{AC} =$$

$$\frac{AH}{AD} =$$

$$\frac{AI}{AE} =$$

Cos ($\hat{B}AF$) =



Angle BAF =

$$\frac{AF}{AB} =$$

$$\frac{AG}{AC} =$$

$$\frac{AH}{AD} =$$

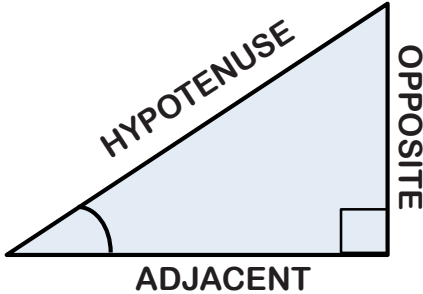
$$\frac{AI}{AE} =$$

Cos ($\hat{B}AF$) =

Discovering Trigonometry



Section D Using your investigation above, match the following cards.



Sine
(Sin)

$\frac{\text{OPPOSITE}}{\text{ADJACENT}}$

Cosine
(Cos)

$\frac{\text{OPPOSITE}}{\text{HYPOTENUSE}}$

Tangent
(Tan)

$\frac{\text{ADJACENT}}{\text{HYPOTENUSE}}$

Section E

	Use a ruler to work out the following:	Use your calculator to work out the following:
	$\frac{\text{OPP}}{\text{HYP}} =$ <input type="text"/>	$\text{Sin } 30^\circ =$ <input type="text"/>
	$\frac{\text{ADJ}}{\text{HYP}} =$ <input type="text"/>	$\text{Cos } 30^\circ =$ <input type="text"/>
$\frac{\text{OPP}}{\text{ADJ}} =$ <input type="text"/>	$\text{Tan } 30^\circ =$ <input type="text"/>	

What do the findings in this table show you? _____

Section F

How might we use the things below to solve problems involving missing lengths and missing angles in right angled triangles?

SOHCAHTOA

