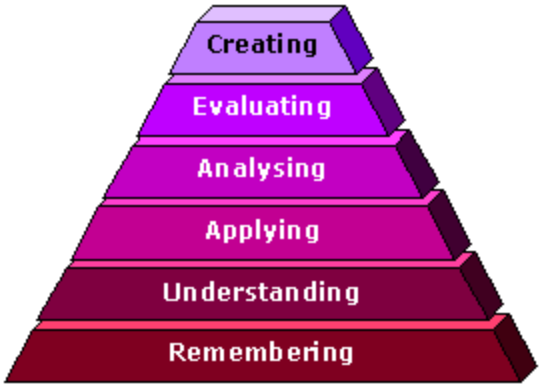
FOM 11 Parallel Lines - A Taxonomy Group name_____



Remembering

Create a list of all the **pairs of angles** used in this investigation.

_____

_____

_____

_____

Understanding

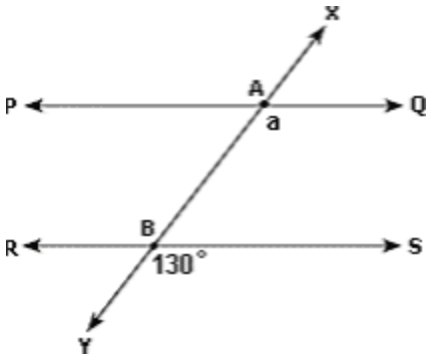
Draw and label a diagram of each pair of angles from above.

Be sure to indicate angle size if that is a consideration in your diagram.

Applying

Find the value of each missing angle in the diagrams below. Give a reason for your answer in each case.

i) $PQ \parallel RS$

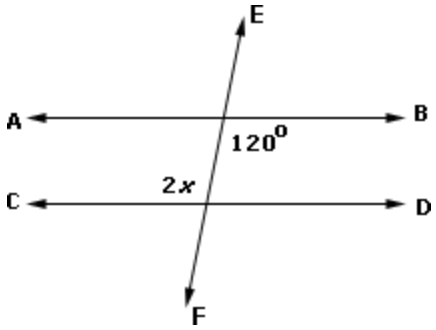


$\angle RBA =$ _____ _____

$\angle BAQ =$ _____ _____

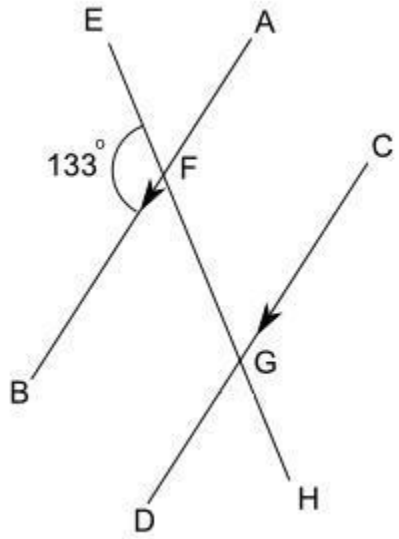
$\angle PAB =$ _____ _____

ii) $AB \parallel CD$



$\angle x =$ _____ _____

iii) $AB \parallel CD$



$\angle EFB =$ _____ _____

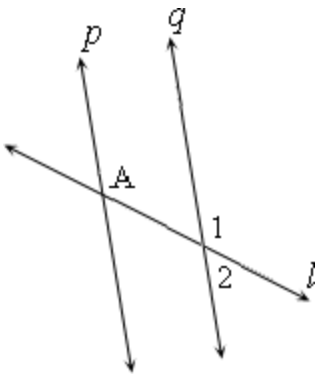
$\angle FGD =$ _____ _____

$\angle CGH =$ _____ _____

Analysing

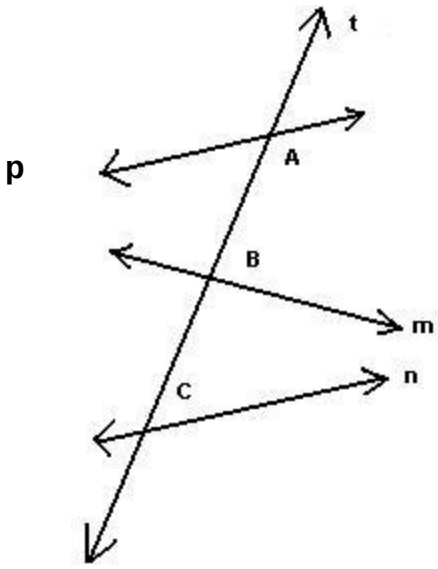
1. Determine the value of the missing angle in order to ensure the indicated lines are parallel.

i) $\angle 1 = 137^0$



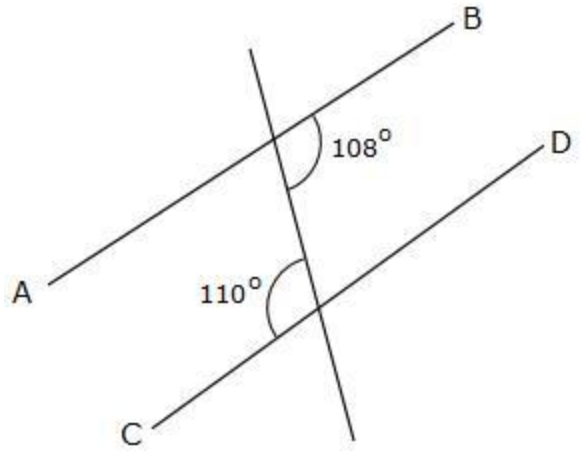
What is the value of $\angle A$ if lines p and q are to be parallel?

ii) Determine the relationship between $\angle A$ *and* $\angle C$ in order that line n || line p

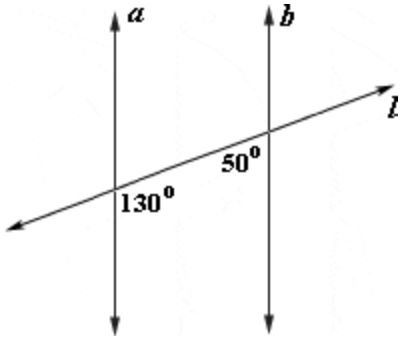


2. Identify which lines are parallel. Give reason(s) for your decision.

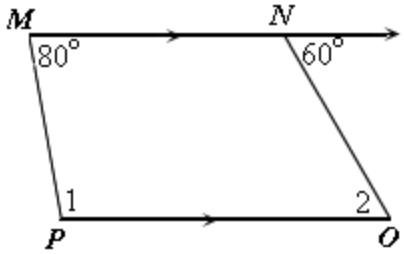
i)



ii)

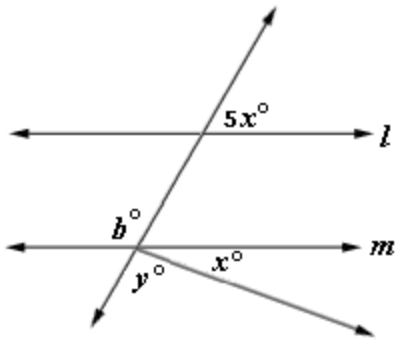


iii)

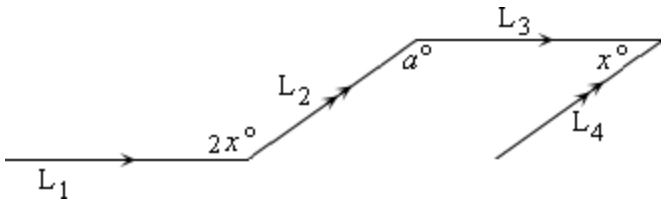


<u>Evaluating</u>

i) Determine the value of angles x, y, and b in the diagram below. Justify your reasons.



ii) Determine the value of $\angle x$ *and* $\angle a$ in the diagram below. Justify your reasons.



Creating

Watch the Video on the Lost City of Petra

http://www.youtube.com/watch?v=mdw0riSQ9eM

Take note of instances where transversals intersect parallel lines.

Provide a sketch/diagram/image of one of the buildings/artifacts shown in the video that illustrates parallel lines and transversals. Your only constraint is your imagination.