

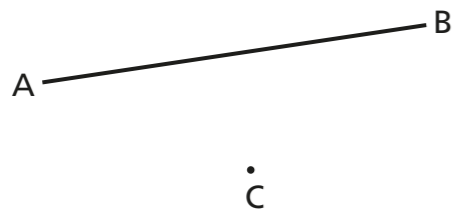
Investigate angles in parallel lines

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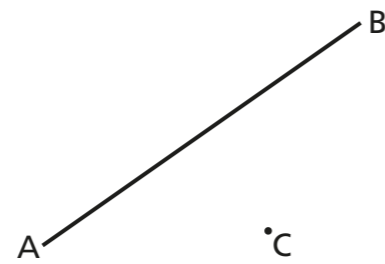
1 For each diagram, draw a line segment that is parallel to AB and goes through point C.

Draw on the diagrams to indicate that the lines are parallel.

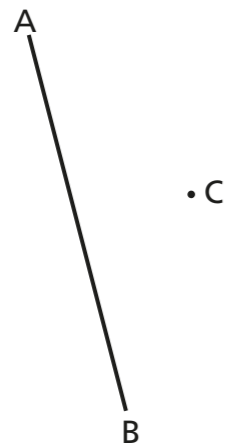
a)



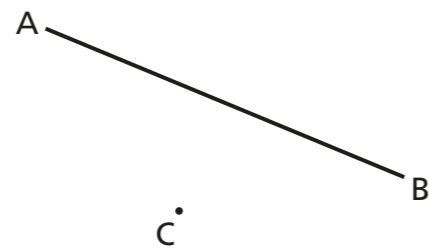
c)



b)

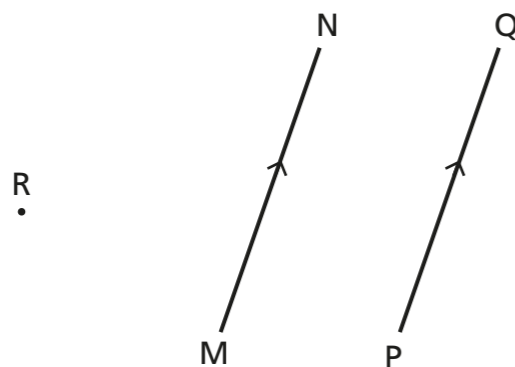


d)



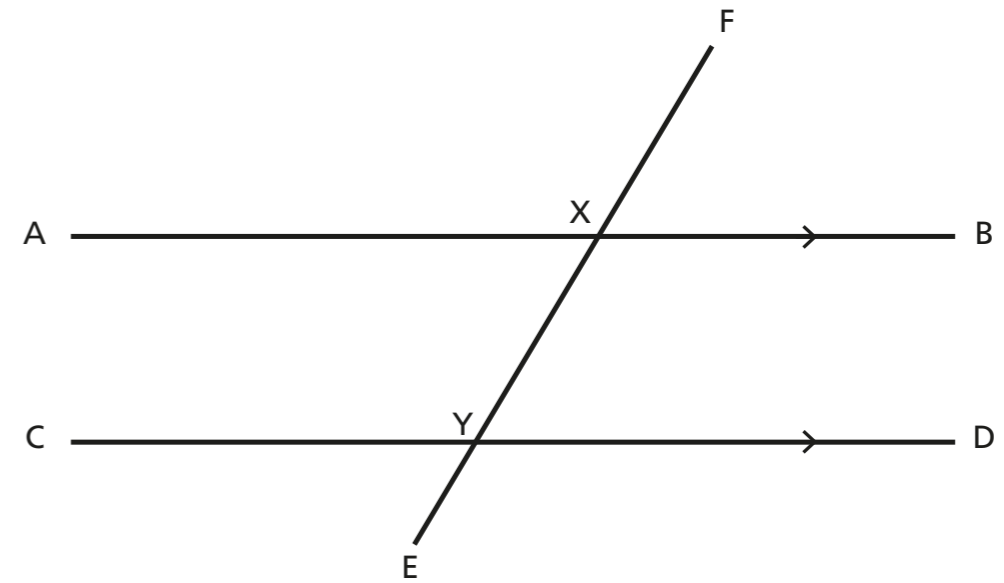
2 Line segments MN and PQ are parallel.

Draw a transversal that cuts through the parallel lines and goes through point R.



3 Line segments AB and CD are parallel.

Line segment EF is a transversal that intersects the line segments at points X and Y respectively.



a) Measure the size of each angle.

$\angle AXF = \boxed{}$

$\angle BXF = \boxed{}$

$\angle AXE = \boxed{}$

$\angle BXE = \boxed{}$

$\angle CYF = \boxed{}$

$\angle DYF = \boxed{}$

$\angle CYE = \boxed{}$

$\angle DYE = \boxed{}$

Compare answers with a partner.

What do you notice?

b) Complete the sentences.

Angle AXE is alternate to angle _____

Angle AXE is corresponding to angle _____

Angle BXF is corresponding to angle _____

Angle CYF is alternate to angle _____



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Line segments QR and ST are parallel.

Line segment UV is a transversal that intersects the line segments at points X and Y respectively.

a) Draw a diagram to represent this.

Compare your diagram with a partner's diagram.

Do they look the same? Does it matter? Why?

b) Eight angles are formed. Measure the size of each angle and label them on the diagram.

Compare answers with a partner.

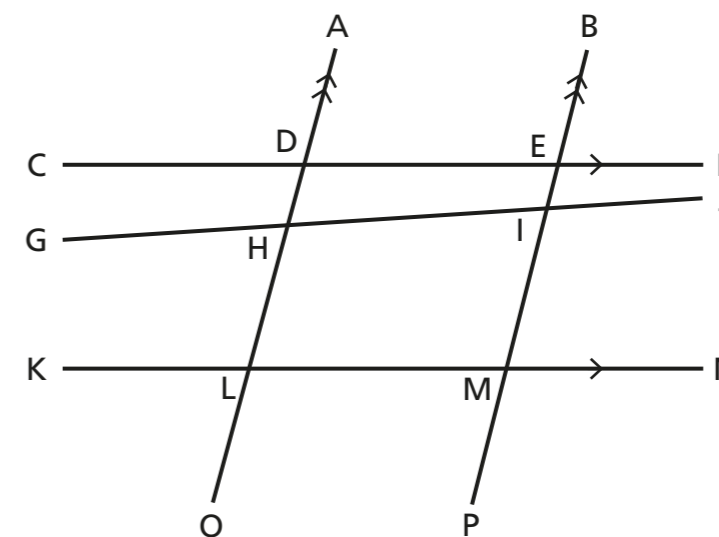
What is the same and what is different?

c) Identify two pairs of alternate angles and two pairs of corresponding angles.

What do you notice?



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a) Complete the sentence in two ways.

Line segments _____ and _____ are parallel.

Line segments _____ and _____ are parallel.

b) Complete the sentence.

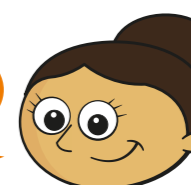
GJ is a _____ that intersects the line segments _____ and _____

c) Identify four pairs of alternate angles.

d) Identify four pairs of corresponding angles.

e)

Angles GHO and ALN are alternate angles.



Do you agree with Dora? _____

Explain your answer.

