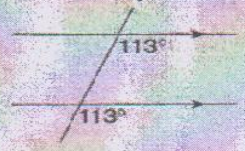
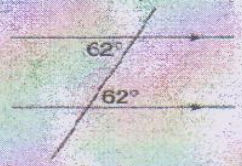
Identify Parallel Lines

Two lines are parallel if:

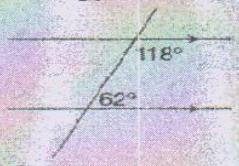
- corresponding angles are equal



- alternate angles are equal



- co-interior angles are supplementary

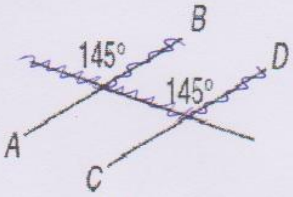


In each case above the lines must be parallel.

|| means 'is parallel to'
⊥ means 'is perpendicular to'

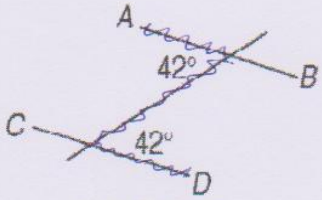
1 In each case, is *AB* parallel to *CD*? Give reasons.

a



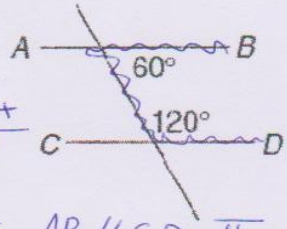
yes. AB // CD
Corresponding angles are equal

b



yes AB // CD
Alternate angles are equal

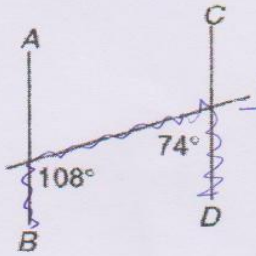
c



60
120 +
180

yes AB // CD. The sum of Cointerior angles = 180°

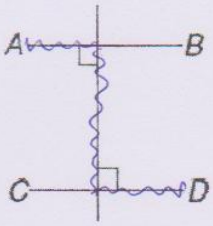
d



74
108 +
182

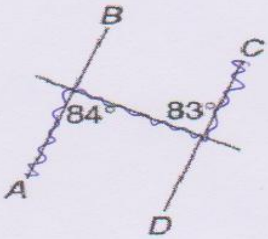
No. AB is not parallel to CD
The sum of cointerior angle is not equal to 180°

e



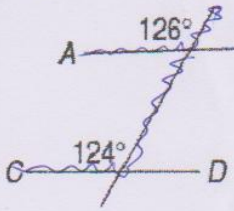
yes AB // CD
Alternate angles are equal

f



No.. AB // CD
AB is not parallel to CD
Alternate angles are not equal.

g



No. AB is not parallel to CD
Corresponding angles are not equal.