

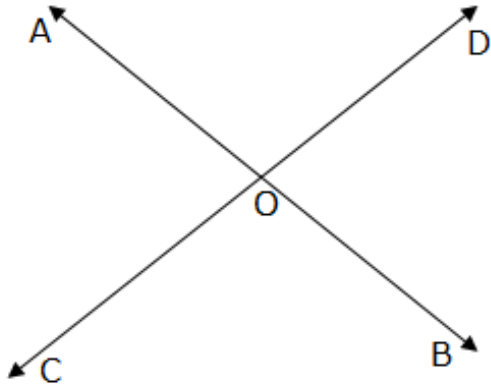
## NCERT Exemplar Solutions in Mathematics class ix, Chapter 5

### Exercise 5.4

NCERT Exemplar Solutions by Dev Anoop

#### Answer 4

The system of axioms is not consistent.



$\angle AOC \neq \angle BOD$  [Vertically opposite angles are not necessarily equal.]

Adding  $\angle BOD$  on both sides

$$\angle AOC + \angle BOD \neq \angle BOD + \angle BOD \quad \dots (i)$$

But if a ray stands on a line, then the sum of two adjacent angles so formed is equal to  $180^\circ$ .

$\therefore$  Not both of L.H.S. and R.H.S. are equal to  $180^\circ$  in (i)

So not consistent.

#### Answer 5

Consistent

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### Exercise 5.4

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