

Interference

Presentation by:

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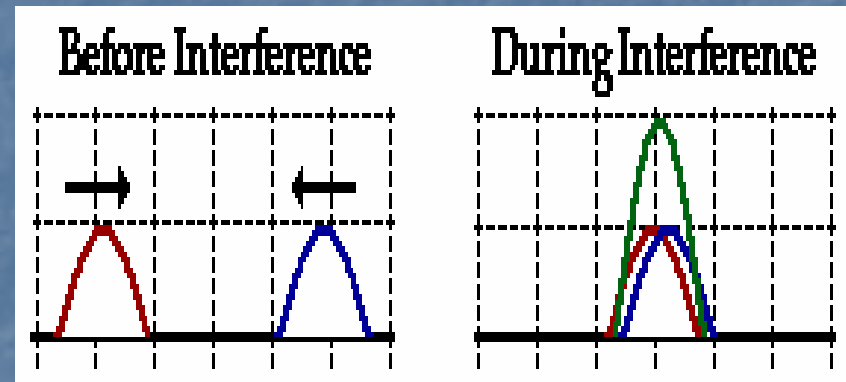
Victor

Interference:

- ≈ Phenomenon that occurs when two or more waves traveling through the same medium meet
- ≈ Causes medium to take on a shape resulting from net effect of the waves upon the particles of the medium

Constructive Interference:

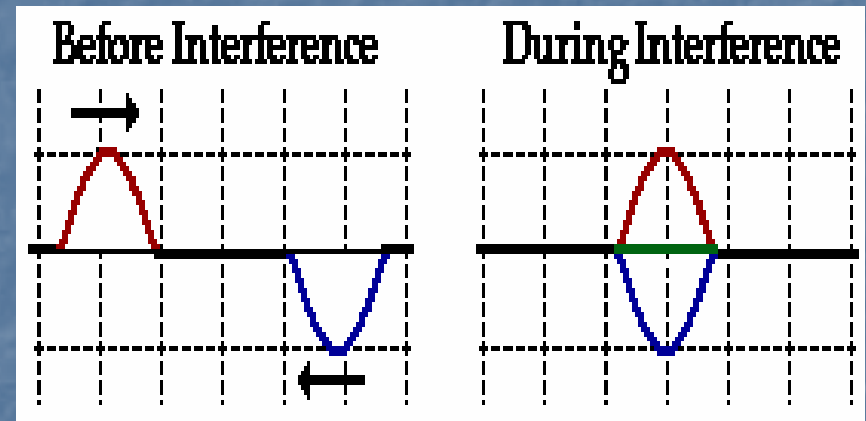
- ≈ Ex. Two waves, each with an amplitude of 1, traveling in opposite directions meet and overlap, and the resulting shape of the medium is a wave with an amplitude of 2
- ≈ For constructive interference, when two/more waves overlap, the resulting wave has a larger amplitude than the original waves



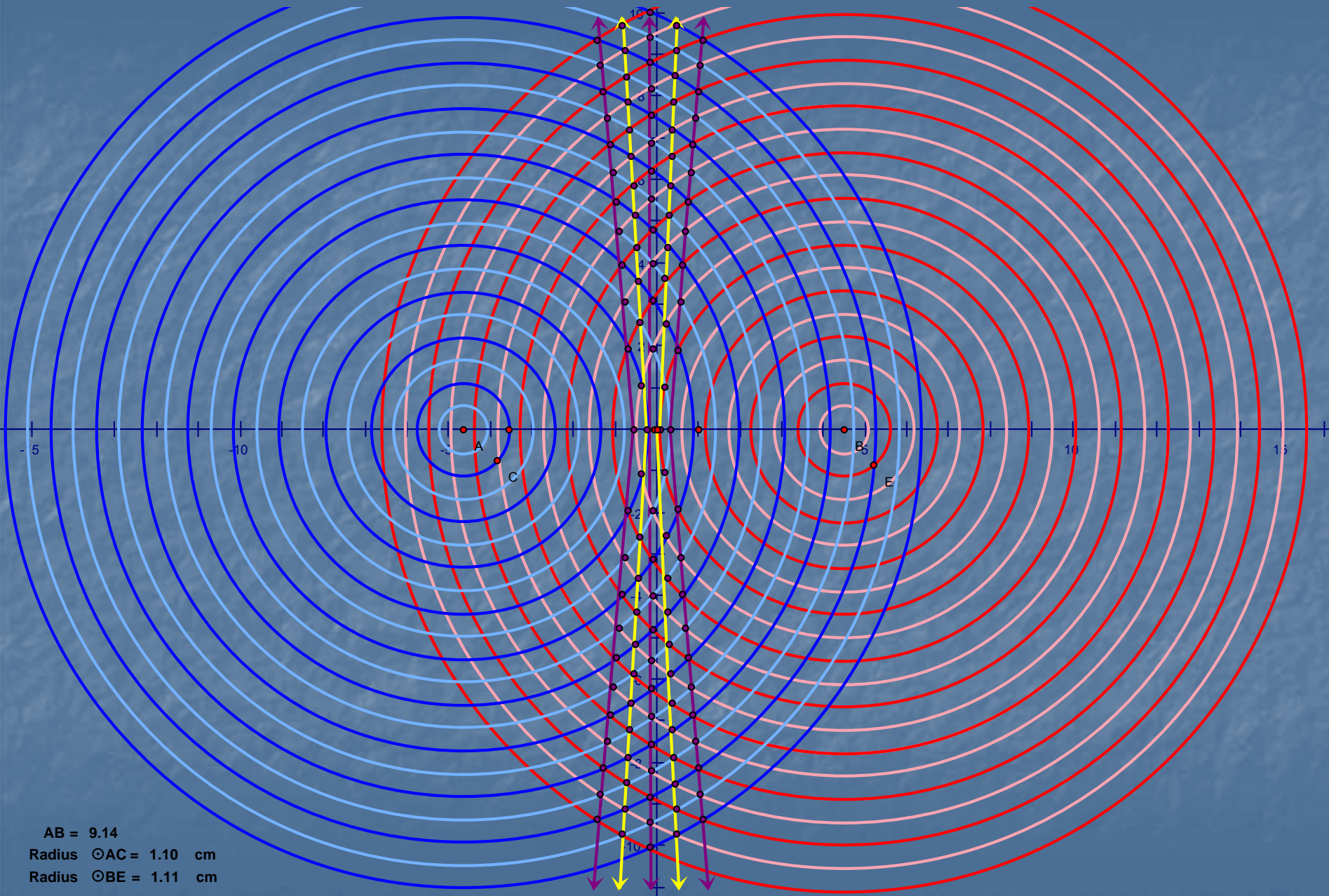
- ≈ Occurs anywhere in the medium when two interfering waves have a displacement in the same direction

Destructive Interference:

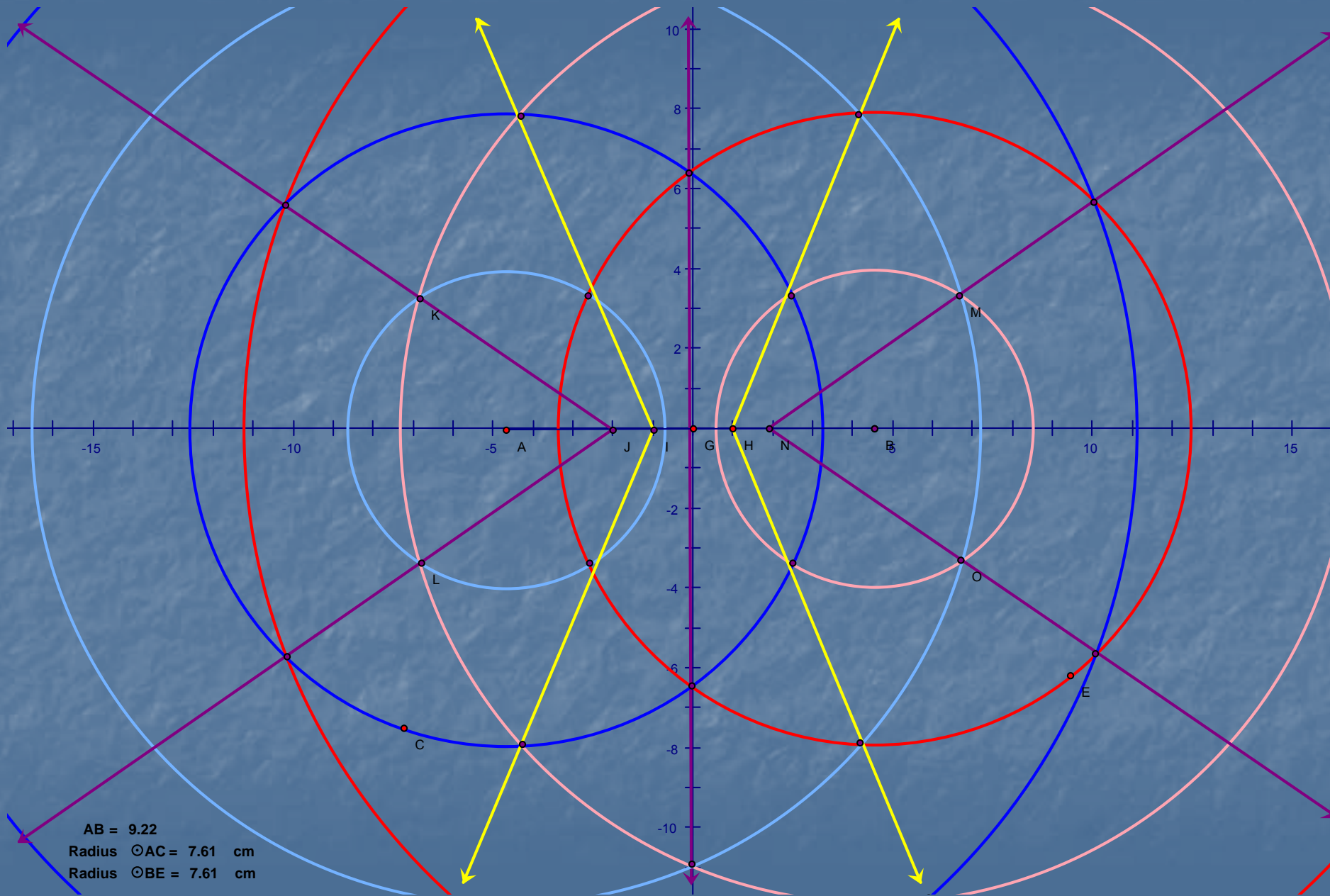
- ≈ Ex. Two waves, each with an amplitude of 1, traveling in opposite directions meet and overlap, and the resulting shape of the medium is a wave with no amplitude.
- ≈ For destructive interference, when two/more waves overlap, the resulting wave has a smaller amplitude than the original waves



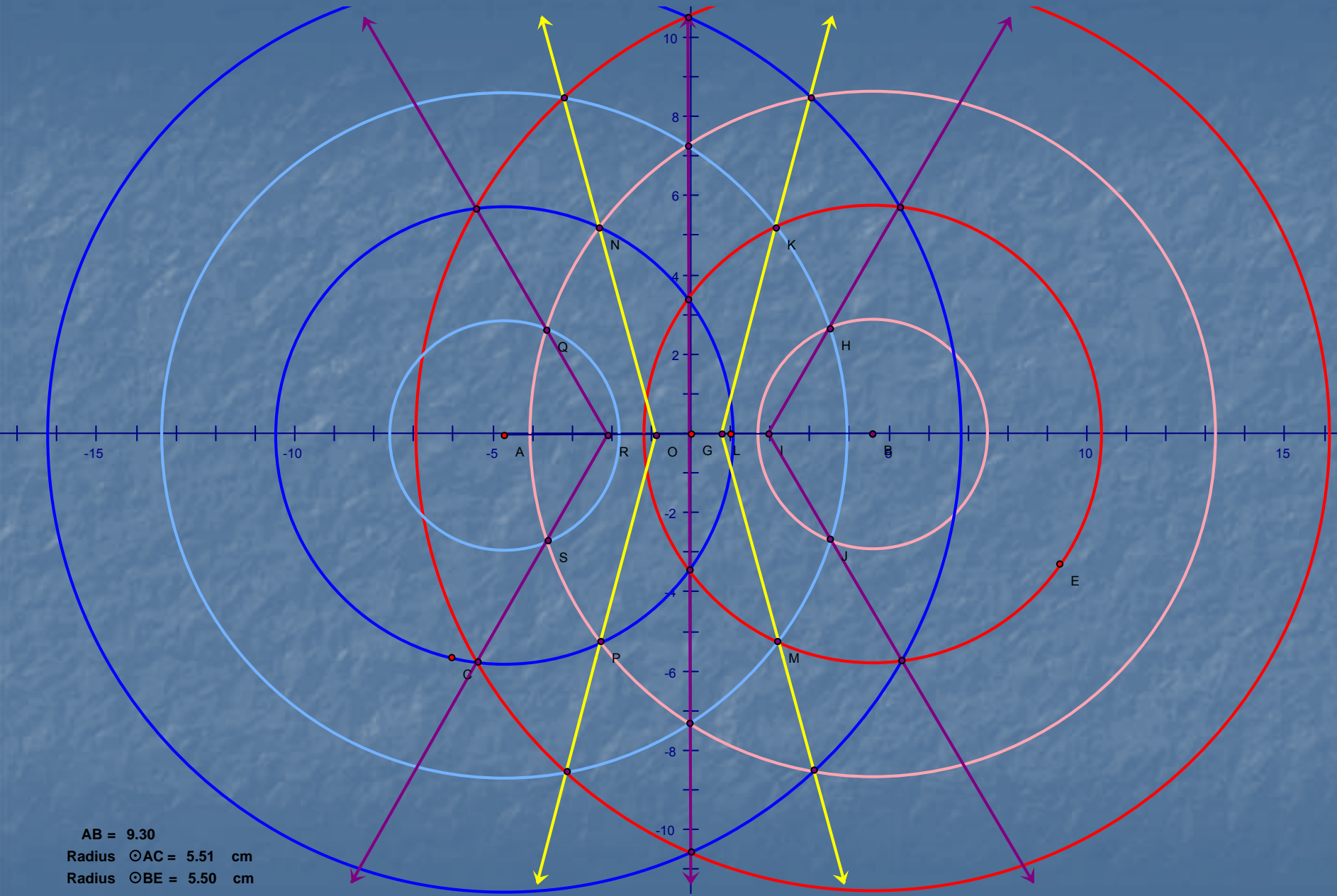
- ≈ Occurs anywhere in the medium when two interfering waves have a displacement in opposite directions



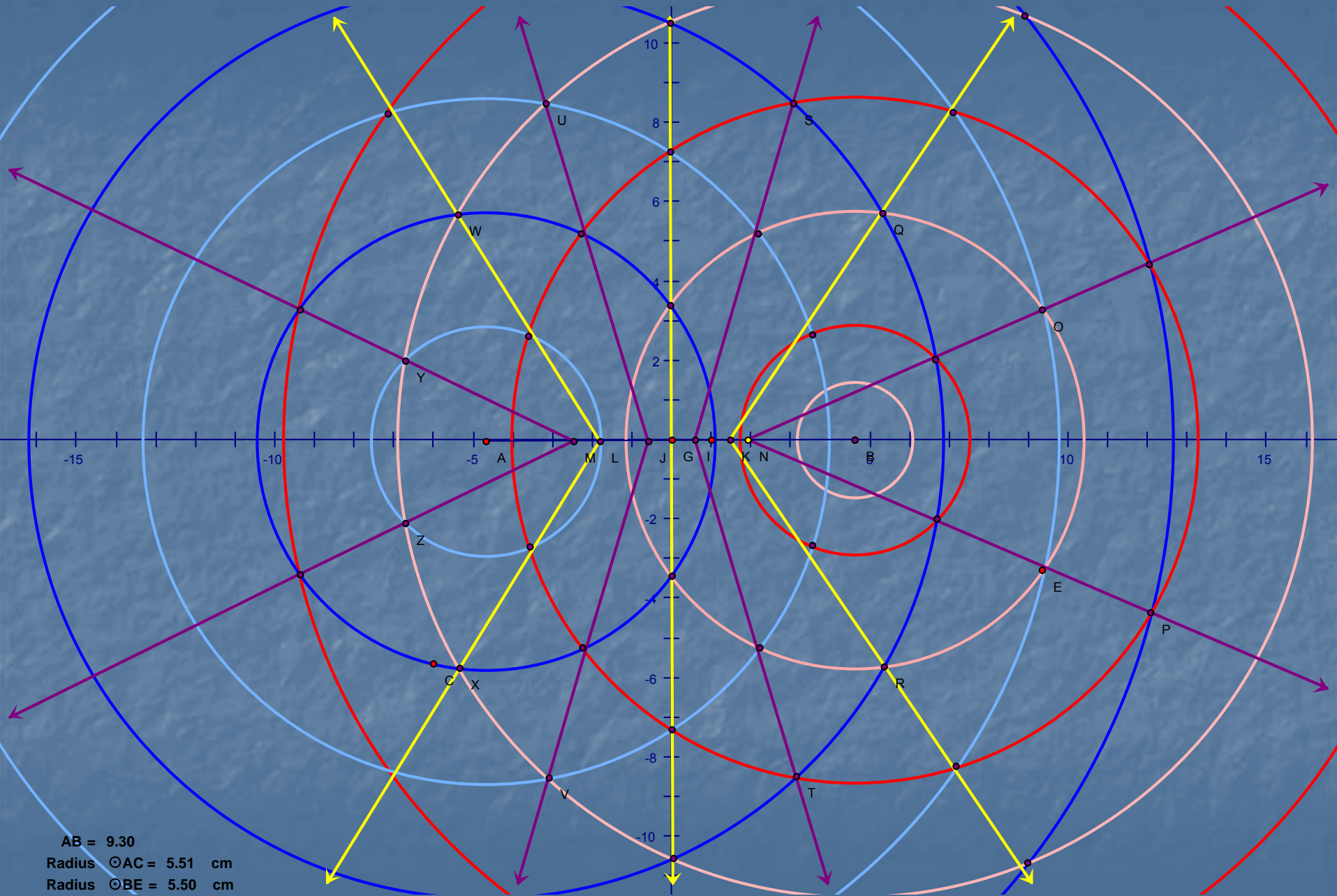
AB = 9.14
 Radius \odot AC = 1.10 cm
 Radius \odot BE = 1.11 cm



AB = 9.22
 Radius $\odot AC = 7.61$ cm
 Radius $\odot BE = 7.61$ cm

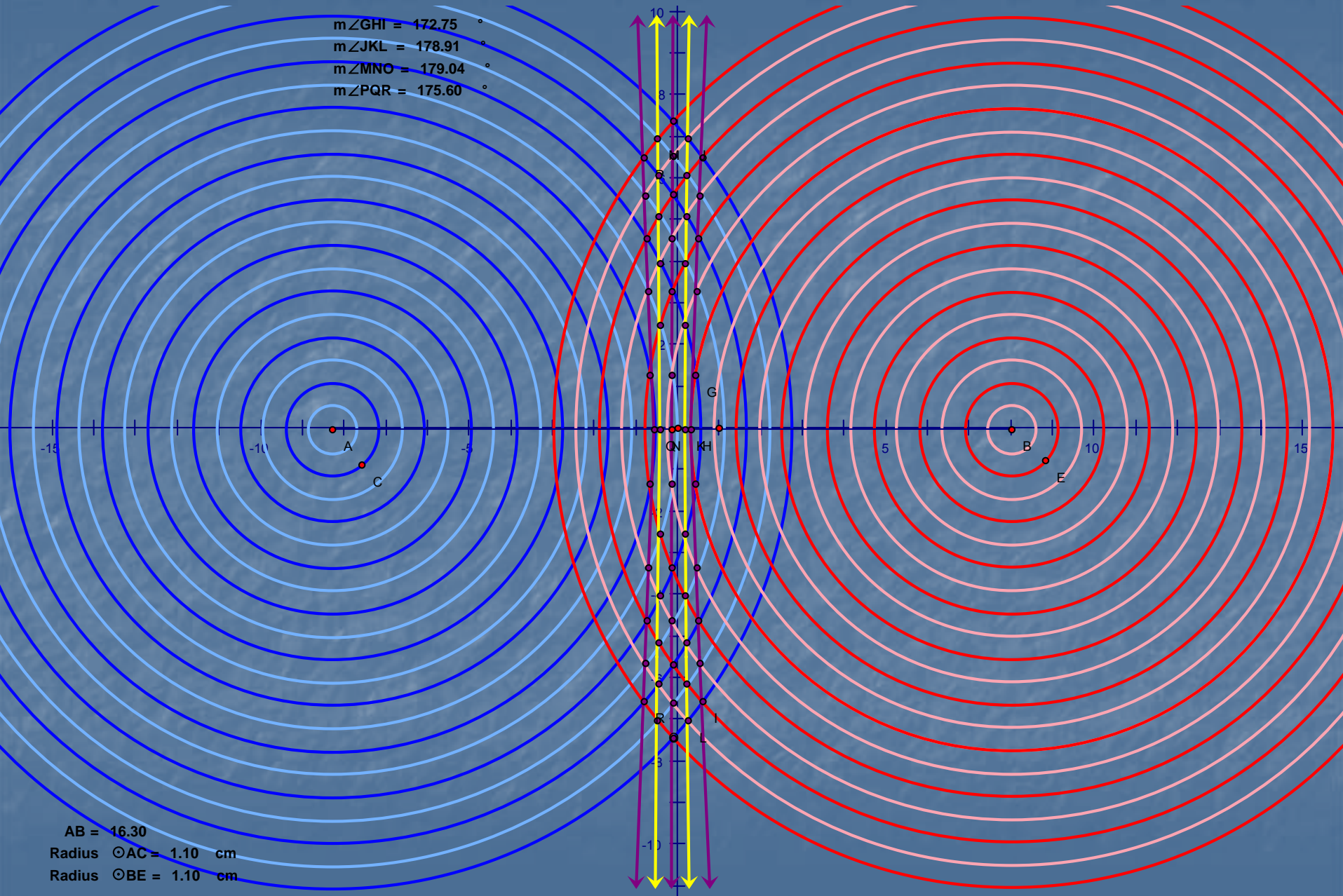


AB = 9.30
Radius $\odot AC = 5.51$ cm
Radius $\odot BE = 5.50$ cm



AB = 9.30
 Radius \odot AC = 5.51 cm
 Radius \odot BE = 5.50 cm

$m\angle GHI = 172.75^\circ$
 $m\angle JKL = 178.91^\circ$
 $m\angle MNO = 179.04^\circ$
 $m\angle PQR = 175.60^\circ$



AB = 16.30
 Radius $\odot AC = 1.10$ cm
 Radius $\odot BE = 1.10$ cm