

10. This would be the set of all points lying on the Bisector of  $\angle ABC$  (The ray coming from the vertex B, and going right through the middle.
14. The only point that satisfies both of these, would be a point on BOTH perpendicular bisectors, which would be the center of the circle, point O.
20. Since the Blue ray is the Bisector of the angle, this would include all points equidistant from the sides of the angle.
26. This would have to be the equation of the Perpendicular Bisector of the segment between A and B.

Find the Equation of the Line between A and B:  $m = \frac{2-0}{0-2} = -1$ , so  $y - 0 = -1(x - 2)$

leaving  $y = -x + 2$ .

Find the midpoint of A and B:  $(\frac{0+2}{2}, \frac{2+0}{2}) = (1,1)$

Therefore the equation of the Perpendicular Bisector is  $y - 1 = 1(x - 1)$  or  $y = x$ .

34. This will be an arc that follows the tip of your nose as you rotate your head.
38. This would be a circle with center at  $(-1, 3)$ , through the points  $(1, 3)$ ,  $(-3, 3)$ ,  $(-1, 5)$  and  $(-1, 1)$ .
44. This would be the lines  $y = \pm 1(x - 3) - 2$  or  $y = -x + 1$  and  $y = x - 5$

48. This would be a circle, assuming the bike tire is a perfect circle.
56. This would be a rectangle, Answer G. (Since we do not know the exact dimensions of the original prism, but we know the sides and base are perpendicular, we know we will have right angles.)