

11. Jayla is in the environmental club at school. As part of a community outreach program, they are planting trees around their neighborhood. The trees will need a support rope attached until the roots begin to grow to stand on their own. If the trees are 6 feet tall and the rope has to make an angle of 35° with the ground, how much support rope will they need? (Hint: You need 2 support ropes, one for each side!)

Picture	Work	Answer

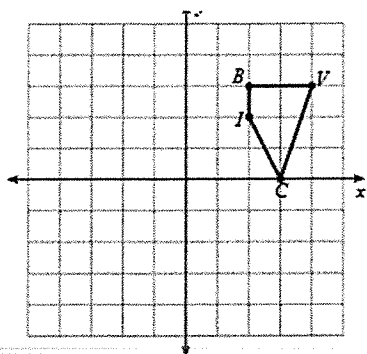
12. Sumaai is standing on top of a cliff looking down at a boat. Her angle of depression to see the boat is 42° . If the boat is 12 km away from the base of the cliff, how tall is the cliff?

Picture	Work	Answer

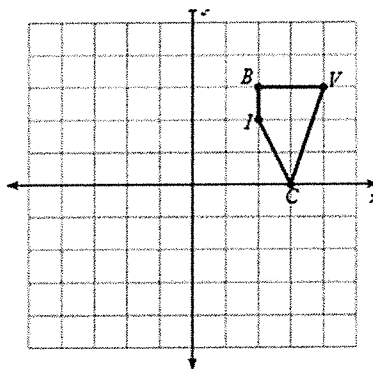
13. $\triangle ABC$ has a right angle at vertex C. If the $\sin A = \frac{x}{y}$, what is the $\cos B$? Explain your reasoning. Draw a picture.

15. Translate 2 units left, 5 units down.

Rule: _____



16. Reflect across the x axis.

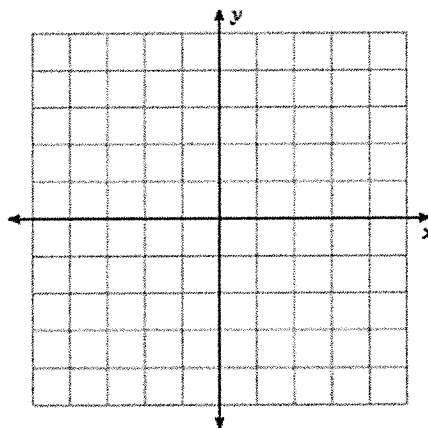
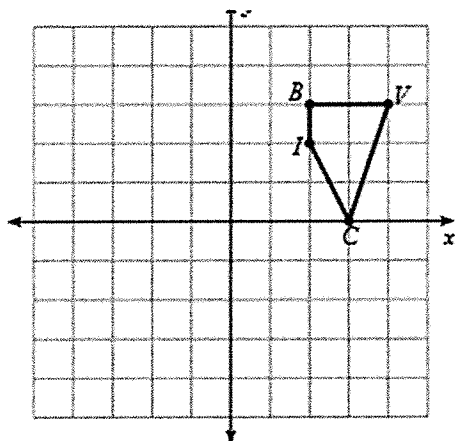


FOR 17 + 18, use (0,0) as the center.

17. Rotate the figure 90°cc.

18. 4. Dilate the figure by a scale factor of 2.

A(1, 1) B(-2, 0) C(2, -1)



What are the new coordinates of A(-3, 7) B(5, 1) C(6,0) when it has been reflected over the:

a) x - axis: A'(,) B' (,) C'(,)

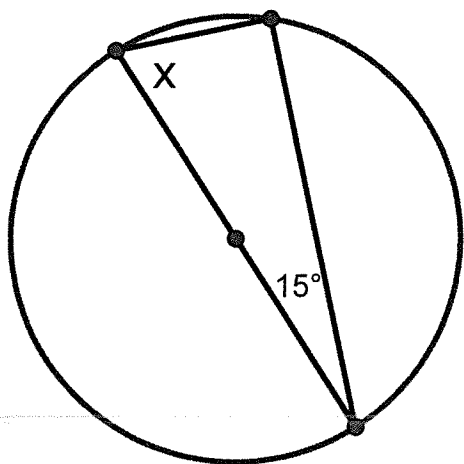
b) y - axis: A''(,) B'' (,) C''(,)

19. A figure has been translated 4 units down and 3 units to the left. How would you describe the transformation?

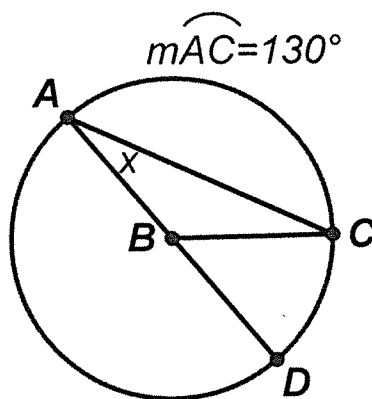
(x, y) → (_____, _____). Use your rule to find the new coordinates of the figure: A(4, -1) B(2, -3) C(-2,5)

A' (,) B' (,) C' (,)

25.



26.



Use the picture in question 26.

27. Name a radius _____
28. Name a chord _____
29. Name a diameter _____
30. Name an arc _____
31. Find the area of a sector with a central angle of 70° and radius of 10 feet.

32. Write the equation of the circle shown below.

