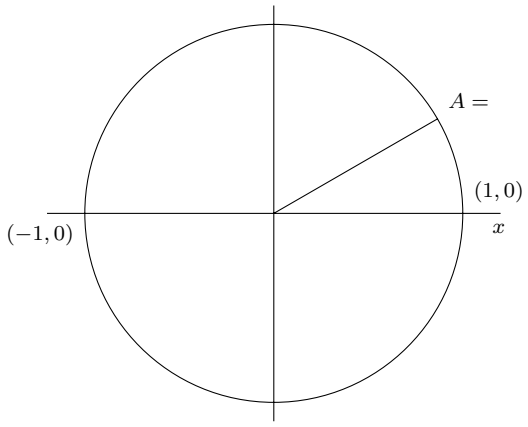
29 May 2018 Name: .

Do Now Quiz: Using the unit circle and the law of sines

Closed book & no notes. Show work in space provided. Work problems in order.

1. Given a circle with radius of one, centered on the origin. An angle with measure 30° is placed in standard position. Mark the point A, the intersection of the circle and angle ray, as an ordered pair.



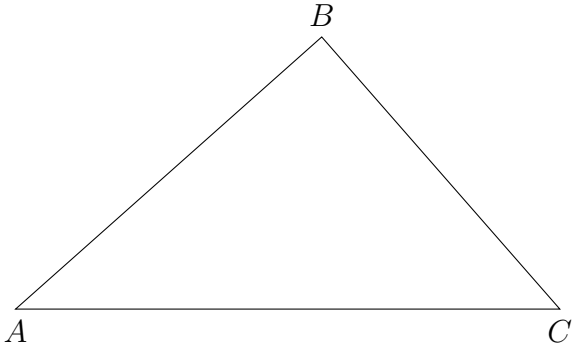
   (a) Write down the value of $\sin 30°$

   (b) Write down the value of $\cos 30°$

2. Triangle ABC has $\hat{A} = 40°$, $AB = 7$ cm, & $BC = 6$ cm. Find the measure of $\hat{C}$:

   (a) Write down the law of sines, substituting appropriate values.

   (b) Solve for the measure of angle C



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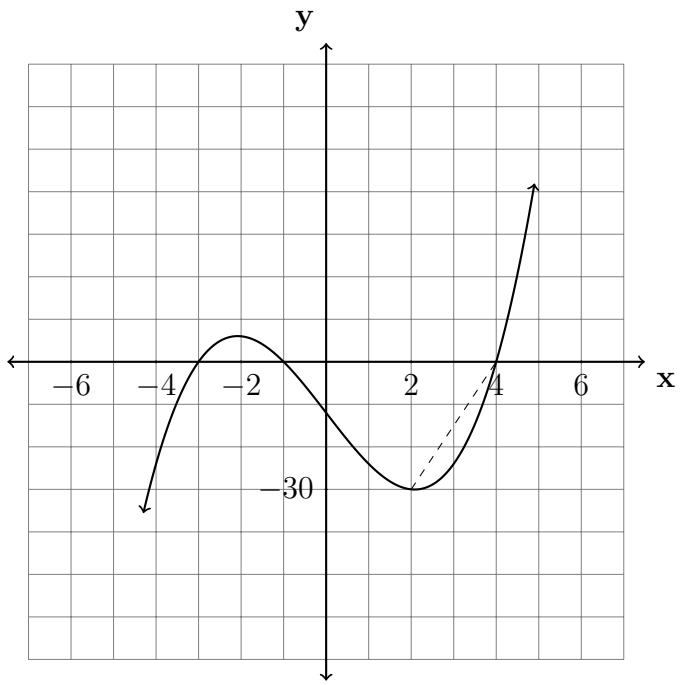
Early finishers

3. The polynomial $f(x) = x^3 - 13x - 12$ is shown on the graph below. What is the slope between the local minimum at $x = 2$ and the x-intercept at $x = 4$? This is called the *average rate of change* between $x = 2, 4$.



4. Simplify the expression $32^{\frac{1}{5}}$. Explain your result.