Blake Q's #12

July 5, 2020

Try and complete all of the problems by hand. Use Desmos / CAS to visualize what is going on.

Question 1

Simplify and factorise $f(x)$ so that it is easy to graph.

$$f(x) = x^2 \ - \ 8x \ + 16 \tag{1}$$

Question 2

Simplify and factorise $f(x)$ by hand. Graph both Q1 and Q2 graphs on the same axis.

***Hint**: Use question 1 to help*

$$f(x) = x^2 \ - \ 8x \ + 23 \tag{2}$$

Question 3

Graph the new skate park given by the function $f(x)$. It's got a π in it so you know it's rad!!

***Hint**: Think about how it would look without the - π and then think how the graph would change when it is added back in.*

$$f(x) = (x-1)^2(x+\frac{5}{2})^3 - \pi \tag{3}$$