Differentiability

Use the graph for the functions and determine the value of x for which the function is not differentiable. Pleases state why. Vertical asymptote, an infinite tangent, or the function is not smooth (corner), Jump Discontinuity.

1. $y = \sin(x) - 2\cos(x)$ for $0 \le x \le 2\pi$



2.
$$y = x^5 - 3x^3 + 4$$





5. $y = sin^2(x)$ for $0 \le x \le 2\pi$



6. $y = x^4 - 4x^3 + 10$









9.
$$y = x^{2/3}(x^2 - 4)$$



10. $y = 2cos^2(x) - sin^2(x)$ for $-\pi \le x \le \pi$



11.
$$y = \frac{x}{\sqrt{x^2+4}}$$



12. $y = tan^2(x)$ for $-\pi \le x \le \pi$



13. Piecewise Function f

