Name : _____ Score : _____

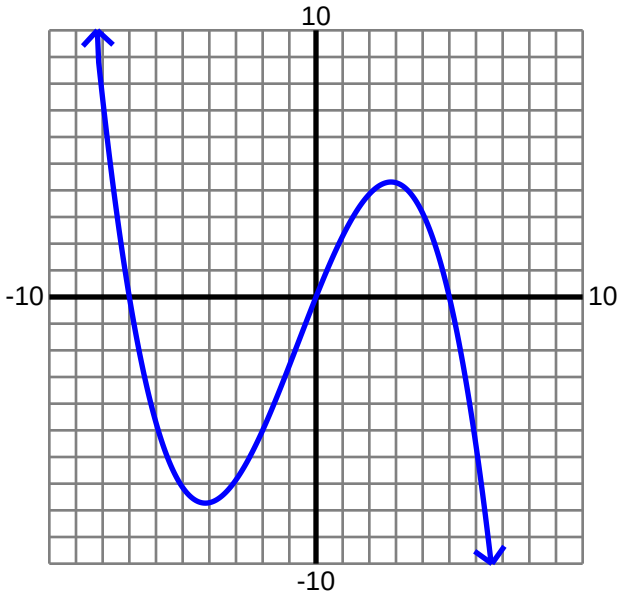
Teacher : _____ Date : _____

Differentials

Find dy and Δy, rounded to two decimals. You may use the graph for reference.

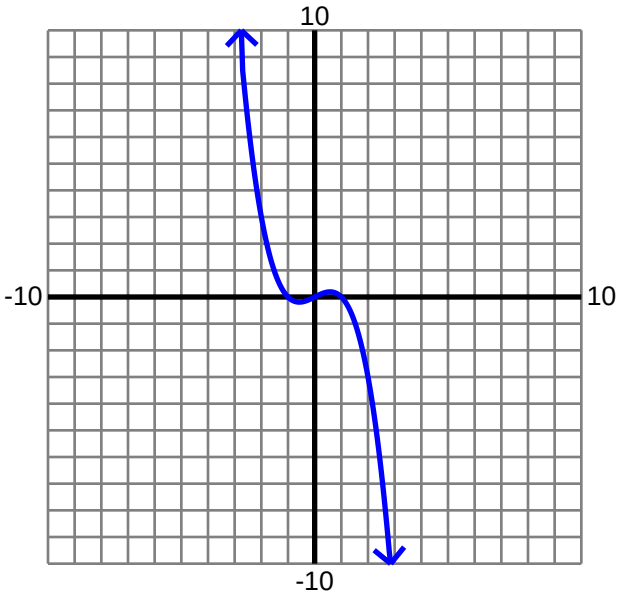
1) $y = -\frac{1}{14}x^3 - \frac{1}{7}x^2 + \frac{5}{2}x$

Given $x_0 = 4$ and $\Delta x = dx = 1$



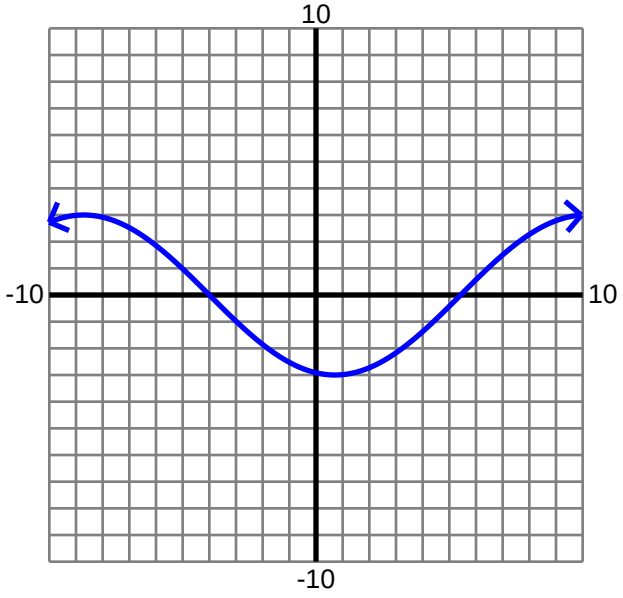
2) $y = -\frac{1}{2}x^3 + \frac{1}{2}x$

Given $x_0 = 0$ and $\Delta x = dx = -1$



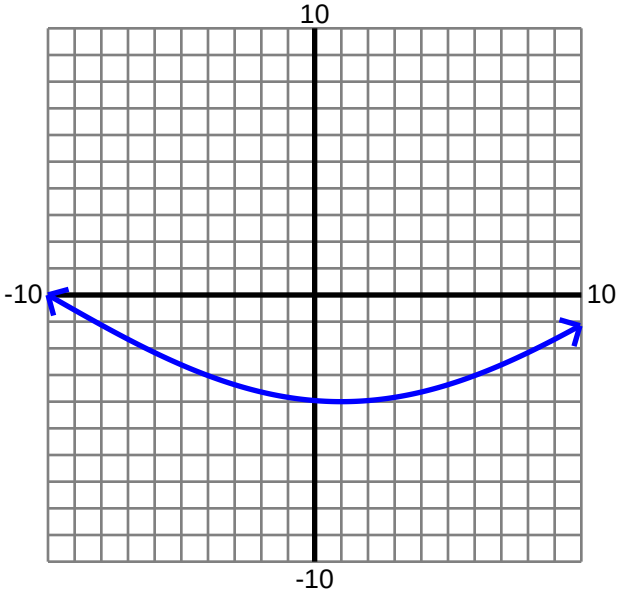
3) $-3\sin(\frac{1}{3}x + \frac{4}{3})$

Given $x_0 = 6$ and $\Delta x = dx = 1$



4) $-4\cos(-\frac{1}{7}x + \frac{1}{7})$

Given $x_0 = 7$ and $\Delta x = dx = -1$



Name : _____ Score : _____

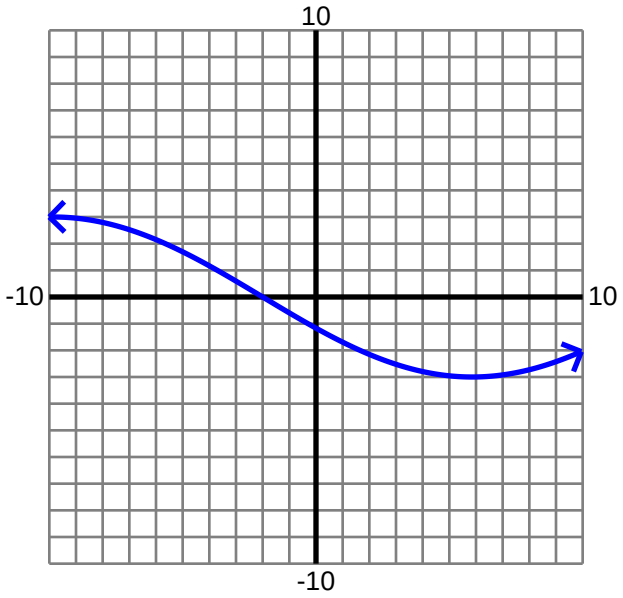
Teacher : _____ Date : _____

Differentials

Find dy and Δy, rounded to two decimals. You may use the graph for reference.

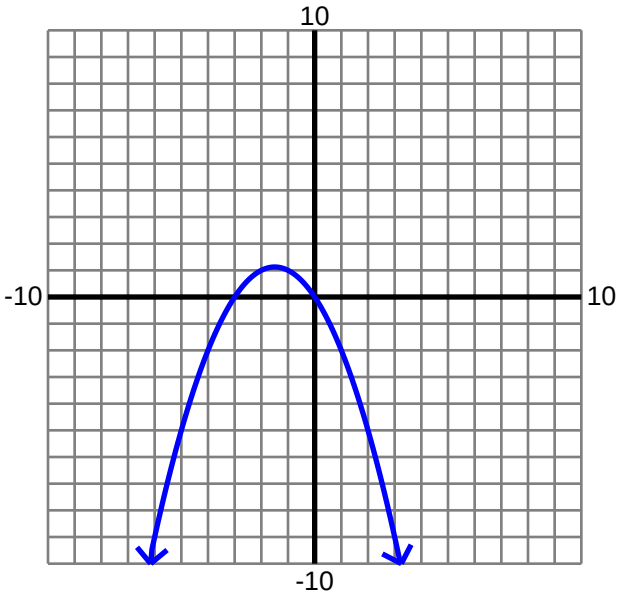
5) $3\sin(-\frac{1}{5}x - \frac{2}{5})$

Given $x_0 = 6$ and $\Delta x = dx = -1$



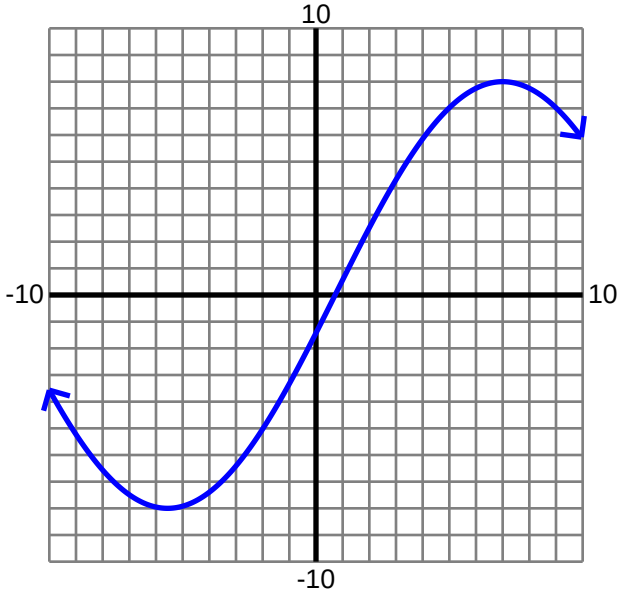
6) $y = -\frac{1}{2}x^2 - \frac{3}{2}x$

Given $x_0 = -1$ and $\Delta x = dx = -1$



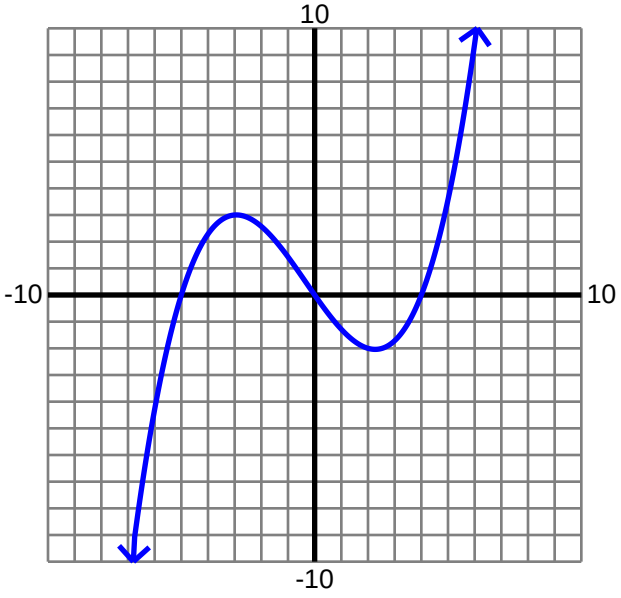
7) $8\cos(\frac{1}{4}x - \frac{7}{4})$

Given $x_0 = -2$ and $\Delta x = dx = -1$



8) $y = \frac{1}{14}x^3 + \frac{1}{14}x^2 - \frac{10}{7}x$

Given $x_0 = -2$ and $\Delta x = dx = 1$



Name : _____ Score : _____

Teacher : _____ Date : _____

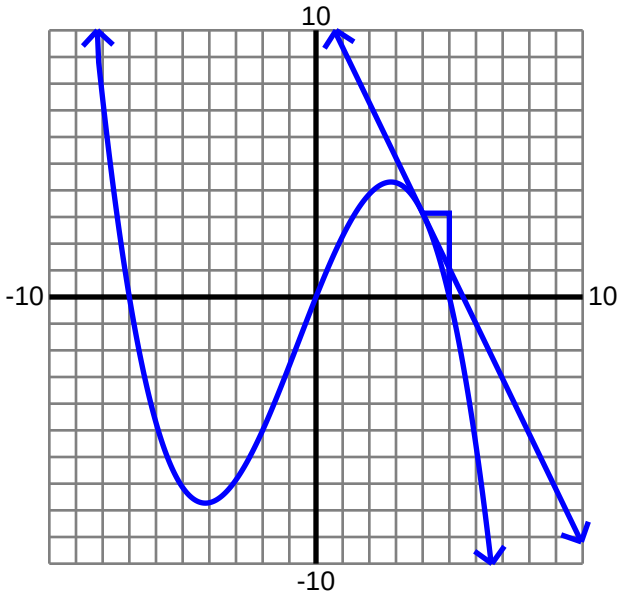
Differentials

Find dy and Δy, rounded to two decimals. You may use the graph for reference.

1) $y = -\frac{1}{14}x^3 - \frac{1}{7}x^2 + \frac{5}{2}x$

Given $x_0 = 4$ and $\Delta x = dx = 1$

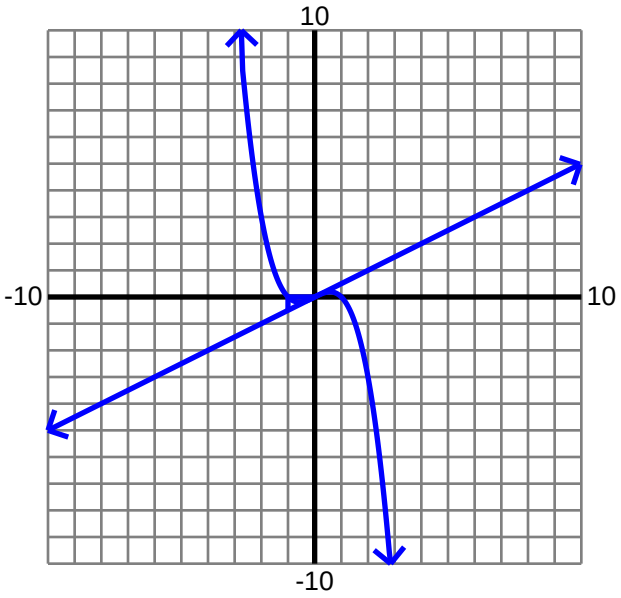
dy = -2.07; Δy = -3.14



2) $y = -\frac{1}{2}x^3 + \frac{1}{2}x$

Given $x_0 = 0$ and $\Delta x = dx = -1$

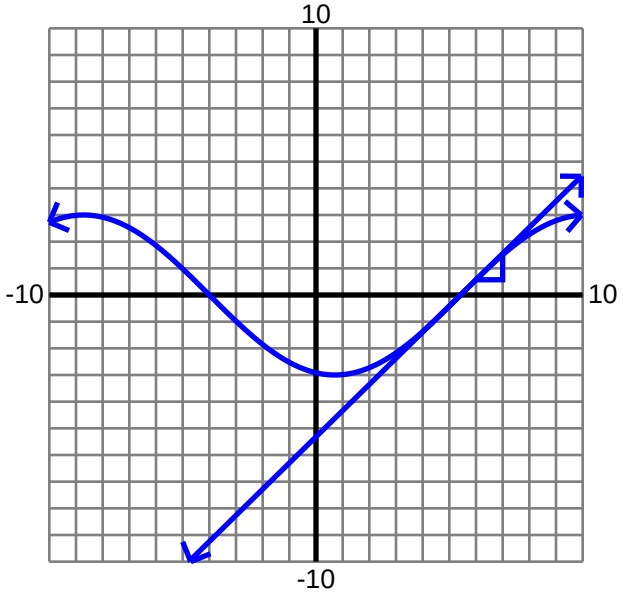
dy = -0.5; Δy = 0



3) $-3\sin(\frac{1}{3}x + \frac{4}{3})$

Given $x_0 = 6$ and $\Delta x = dx = 1$

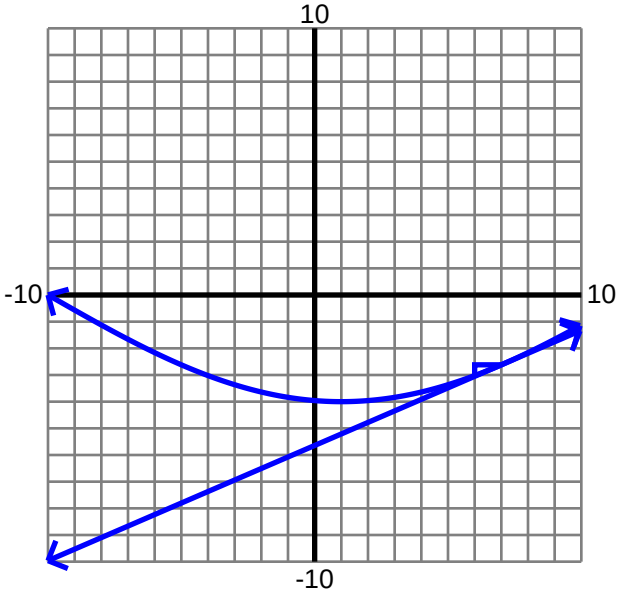
dy = 0.98; Δy = 0.93



4) $-4\cos(-\frac{1}{7}x + \frac{1}{7})$

Given $x_0 = 7$ and $\Delta x = dx = -1$

dy = -0.43; Δy = -0.4



Name : _____ Score : _____

Teacher : _____ Date : _____

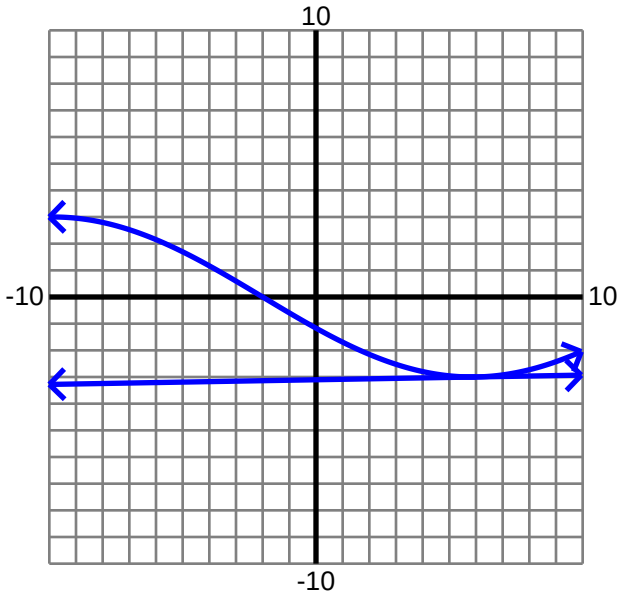
Differentials

Find dy and Δy, rounded to two decimals. You may use the graph for reference.

5) $3\sin(-\frac{1}{5}x - \frac{2}{5})$

Given $x_0 = 6$ and $\Delta x = dx = -1$

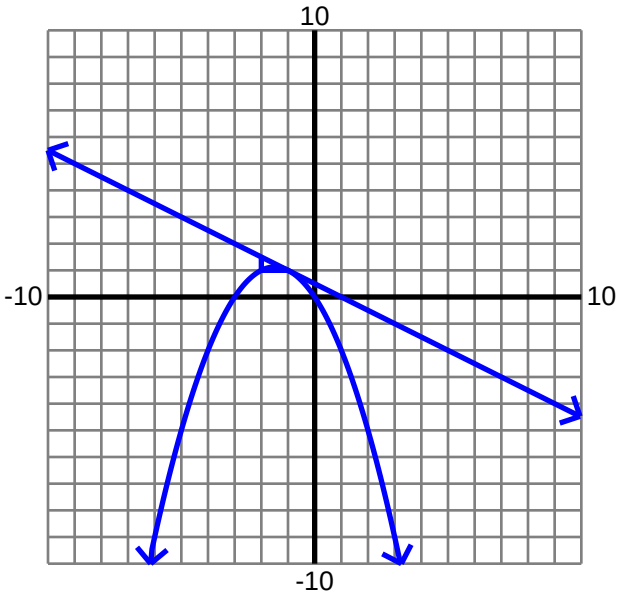
dy = -0.02; Δy = 0.04



6) $y = -\frac{1}{2}x^2 - \frac{3}{2}x$

Given $x_0 = -1$ and $\Delta x = dx = -1$

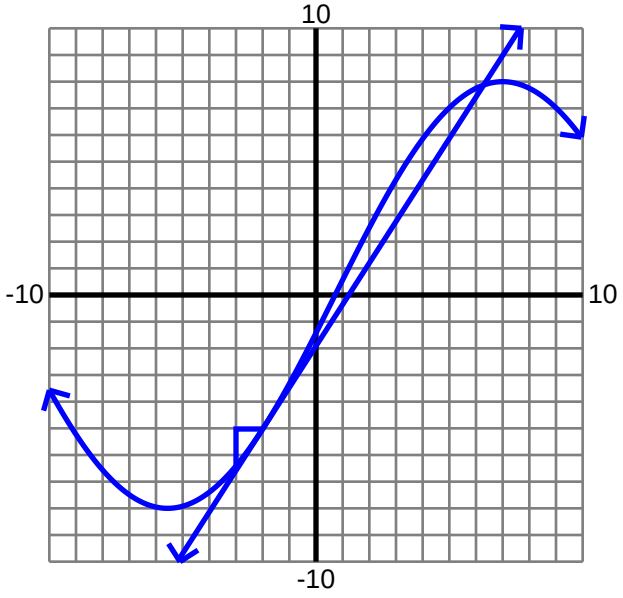
dy = 0.5; Δy = 0



7) $8\cos(\frac{1}{4}x - \frac{7}{4})$

Given $x_0 = -2$ and $\Delta x = dx = -1$

dy = -1.56; Δy = -1.38



8) $y = \frac{1}{14}x^3 + \frac{1}{14}x^2 - \frac{10}{7}x$

Given $x_0 = -2$ and $\Delta x = dx = 1$

dy = -0.86; Δy = -1.14