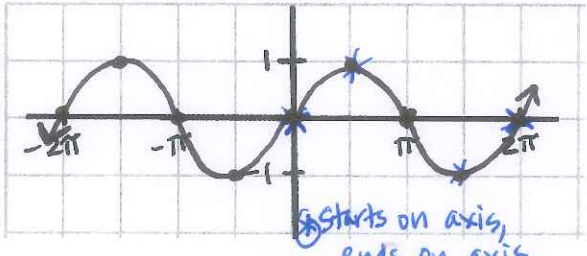
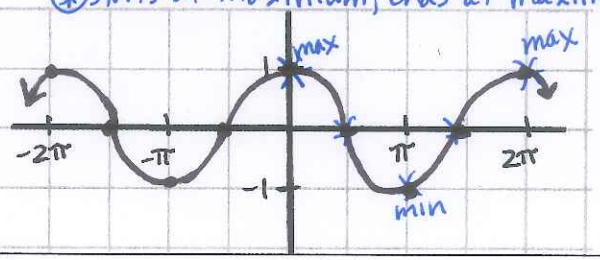
1) y = sinx



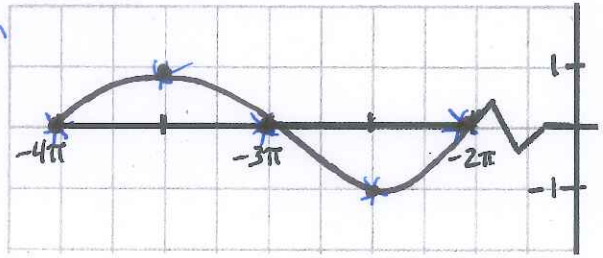
*Starts on axis, ends on axis

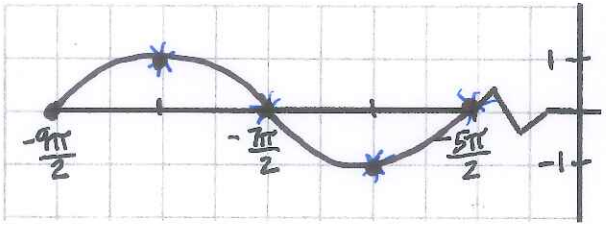
2) y = cosx

*starts at maximum, ends at maximum



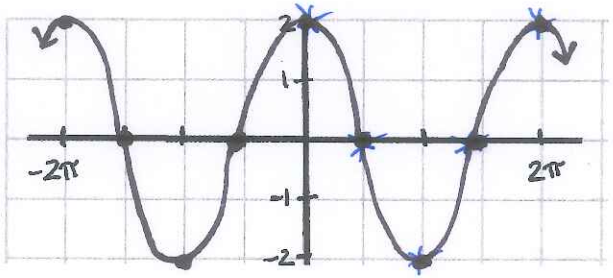
3) y = sinx *(only graph for $-4\pi \le x \le -2\pi$ as given)*



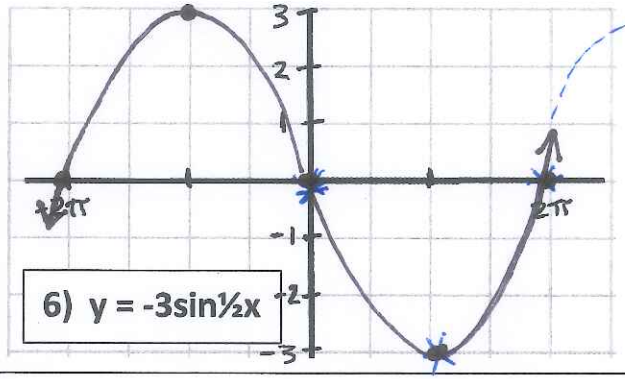


4) y = cosx

#4-12 → Sketch only for the given increments!!

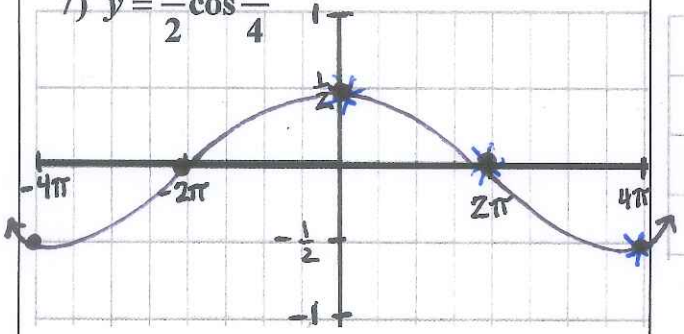


5) y = 2cosx



6) y = -3sin½x

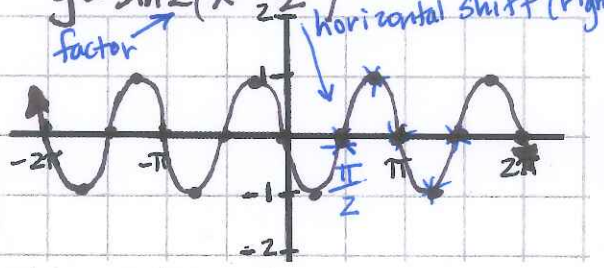
7) $y = \frac{1}{2}\cos\frac{x}{4}$



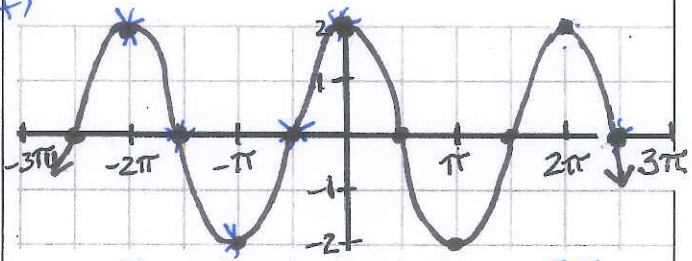
$y = \sin 2\left(x - \frac{\pi}{2}\right)$ h.s. = π/2

factor

horizontal shift (right)

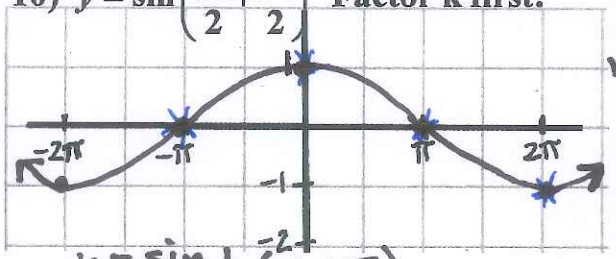


8) y = sin(2x − π) *Hint: factor k first!*



9) y = 2cos(x + 2π) h.s. = −2π (left)

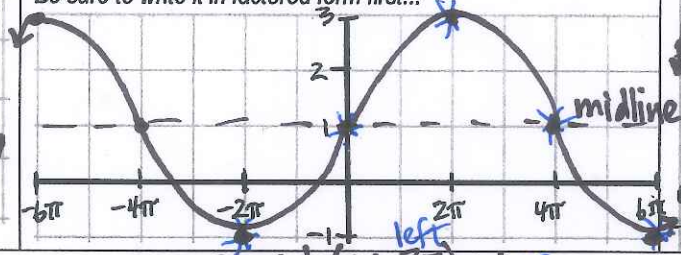
10) $y = \sin\left(\frac{x}{2} + \frac{\pi}{2}\right)$ Factor k first!



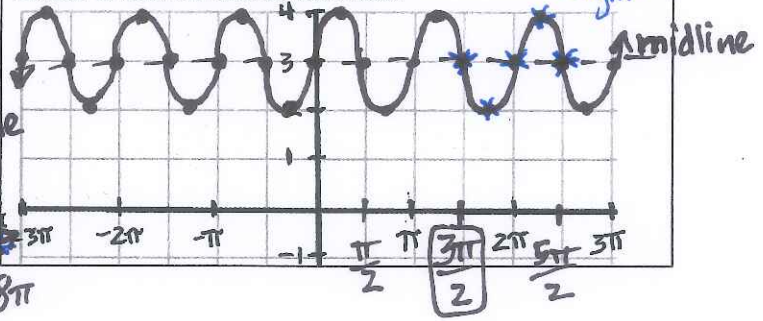
$y = \sin\frac{1}{2}(x + \pi)$ ← h.s. = −π left

11) $y = -2\cos\left(\frac{1}{4}x + \frac{\pi}{2}\right) + 1$

Be sure to write it in factored form first!!!



$y = -2\cos\frac{1}{4}(x + 2\pi) + 1$ left h.s. −2π; up v.s.; flip; a; k; per = 8π

12) $y = -\sin(2x - 3\pi) + 3$ $y = -\sin 2\left(x - \frac{3\pi}{2}\right) + 3$ (3 up; $\frac{3\pi}{2}$ right)

Be sure to write it in factored form first!!!