

SINE AND COSINE GRAPHS

FOR EACH FUNCTION, STATE THE AMPLITUDE, PERIOD, PHASE SHIFT, AND VERTICAL SHIFT. THEN GRAPH **ONE PERIOD** OF THE FUNCTION.

1. $f(x) = \cos 2(x - \frac{\pi}{3}) + 2$



2. $f(x) = -3\sin(x - \pi)$



3. $y = \frac{1}{2}\sin x - 2$



4. $f(x) = -2\sin\frac{1}{2}(x + 2\pi) - 2$



5. $g(x) = -8\cos 2(x - \pi) + 3$



6. $y = 2\cos(2x + \frac{\pi}{3})$



7. $f(x) = 3\sin(2x + 5\pi)$



8. $y = \sin(3x + \pi)$



