

Trigonometry 4 1 to 4 4 Study Packet Review and Critical Problems Analysis

Lesson 158 | Trigonometry | Sine and cosine graphs • Tangent, cotangent, secant and cosecant graphs

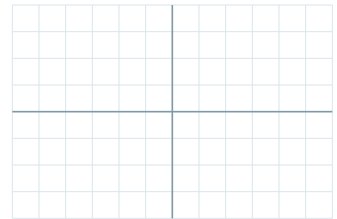
<https://www.youtube.com/watch?v=ijpDienPQkw>

Related review: exact coverage needs teacher confirmation.

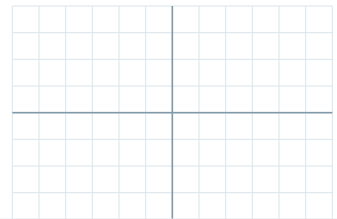
Name: _____ Date: _____ Show your reasoning.

01

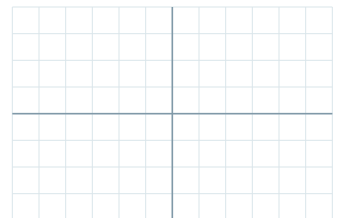
Analyze and sketch one cycle of $y=12\sin(5(x-(-6)))+2$. Give amplitude, period, phase shift, midline, and five key points.

**02**

Graph $y=8\tan(2(x-(6)))+13$. Give period, center, and adjacent vertical asymptotes.

**03**

Analyze and sketch one cycle of $y=11\sin(7(x-(2)))+13$. Give amplitude, period, phase shift, midline, and five key points.



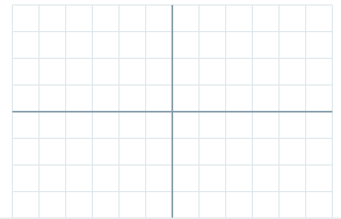
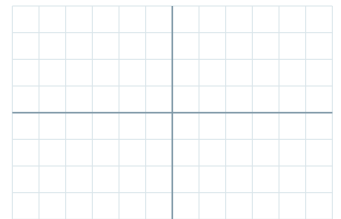
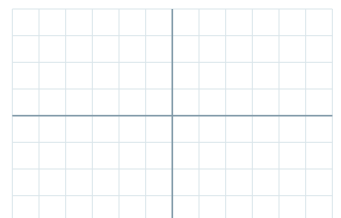
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Name: _____ Date: _____ Show your reasoning.

04Graph $y=6\tan(3(x-(-5)))+7$. Give period, center, and adjacent vertical asymptotes.**05**Analyze and sketch one cycle of $y=11\sin(4(x-(7)))+13$. Give amplitude, period, phase shift, midline, and five key points.**06**Graph $y=9\tan(3(x-(8)))+13$. Give period, center, and adjacent vertical asymptotes.

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- 01** Analyze and sketch one cycle of $y=12\sin(5(x-(-6)))+2$. Give amplitude, period, phase shift, midline, and five key points.

Amplitude 12; period $2\pi/5$; shift -6; midline $y=2$. Start at $x=-6$; use x-increments $\pi/10$. The five y-values are 2,14,2,-10,2.

- 02** Graph $y=8\tan(2(x-(6)))+13$. Give period, center, and adjacent vertical asymptotes.

Period $\pi/2$; center (6,13); asymptotes $x=6\pm\pi/4$. At $x=6\pm\pi/8$, $y=13\pm 8$, respectively. Repeat every $\pi/2$.

- 03** Analyze and sketch one cycle of $y=11\sin(7(x-(2)))+13$. Give amplitude, period, phase shift, midline, and five key points.

Amplitude 11; period $2\pi/7$; shift 2; midline $y=13$. Start at $x=2$; use x-increments $\pi/14$. The five y-values are 13,24,13,2,13.

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04

Graph $y=6\tan(3(x-(-5)))+7$. Give period, center, and adjacent vertical asymptotes.

Period $\pi/3$; center $(-5,7)$; asymptotes $x=-5\pm\pi/6$. At $x=-5\pm\pi/12$, $y=7\pm6$, respectively. Repeat every $\pi/3$.

05

Analyze and sketch one cycle of $y=11\sin(4(x-(7)))+13$. Give amplitude, period, phase shift, midline, and five key points.

Amplitude 11; period $2\pi/4$; shift 7; midline $y=13$. Start at $x=7$; use x-increments $\pi/8$. The five y-values are 13,24,13,2,13.

06

Graph $y=9\tan(3(x-(8)))+13$. Give period, center, and adjacent vertical asymptotes.

Period $\pi/3$; center $(8,13)$; asymptotes $x=8\pm\pi/6$. At $x=8\pm\pi/12$, $y=13\pm9$, respectively. Repeat every $\pi/3$.