Trig Section 4.1
Name $\qquad$
Memorize the following!!!!!!!!!!!!!!!!



Name $\qquad$
Find the armpituge and period, then find $b$ and write the equation that matches the graph.
12.


$$
\begin{aligned}
& \mathrm{amp}=4 \\
& \text { Period }=\pi
\end{aligned}
$$

11. amp $=4+\pi$
Period $=\pi$

$$
b=2
$$



$$
b=2
$$

$\cos 2 x$
13.

$$
\begin{aligned}
& \operatorname{anp} 3 \\
& \operatorname{Period}=\frac{\pi}{2} \\
& 3 \\
& 3 \cos 4 x
\end{aligned}
$$

$$
b=1
$$

Find the period and amplitude of each cosine function. Identify where the maximum value, minimum value, and zeros occur in the interval from
14.


Period: $2 \pi$ Amplitude:

Maximum: 4
$\begin{array}{ll}\text { Minimum: }-4 \\ \text { Zeros: } & 0, \pi, 2 \pi\end{array}$
15.


Period: $2 \pi$
Maximum: 5
Minimum: -5
Zeros: $\quad \frac{\pi}{2}, \frac{3 \pi}{2}$

Writ a cosine function for each description, assume $a$ is positive.
16. $a=2 \pi$, period $=3$
17. $a=7$, period $=2 \pi$
18. $a=23$, period $=\frac{\pi}{2}$

$$
y=2 \pi \cos \frac{2 \pi}{3} x
$$

$$
y=7 \cos 1 x
$$

$$
y=23 \cos 4 x
$$

