

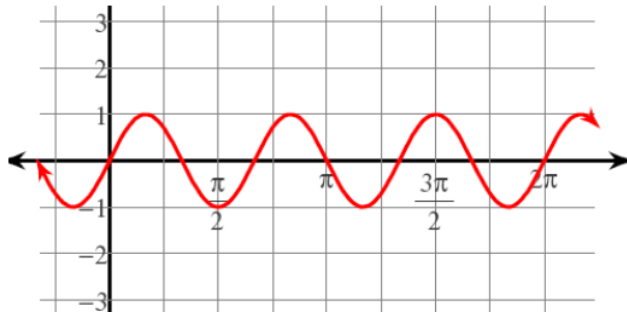
Name:

Period:

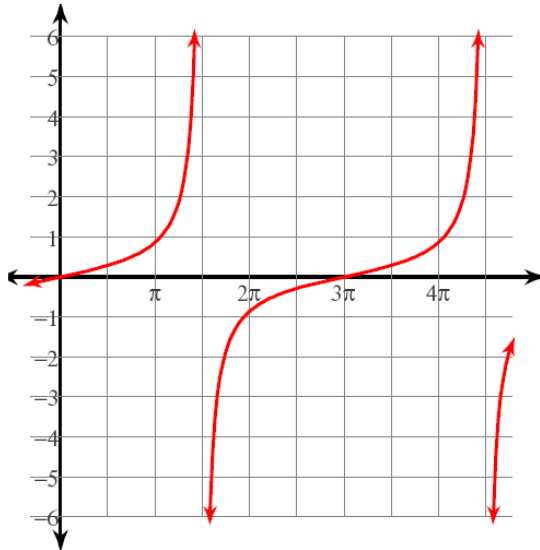
Date:

Practice Worksheet: Writing Trig Equations

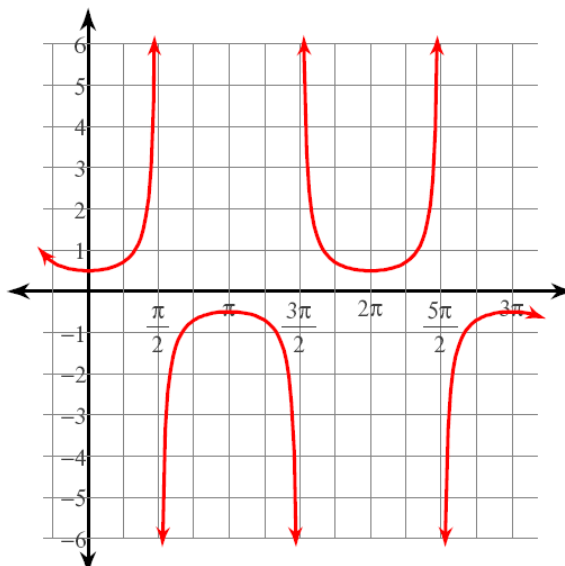
1. Write a sine equation for the periodic function.



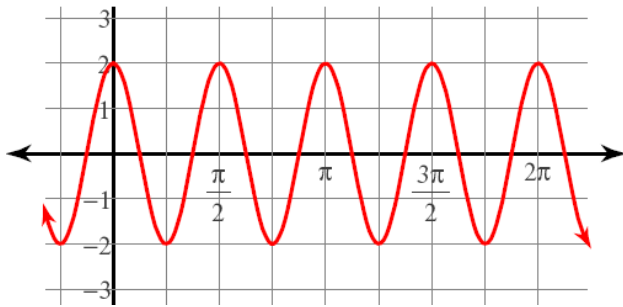
2. Write a tangent equation for the periodic function.



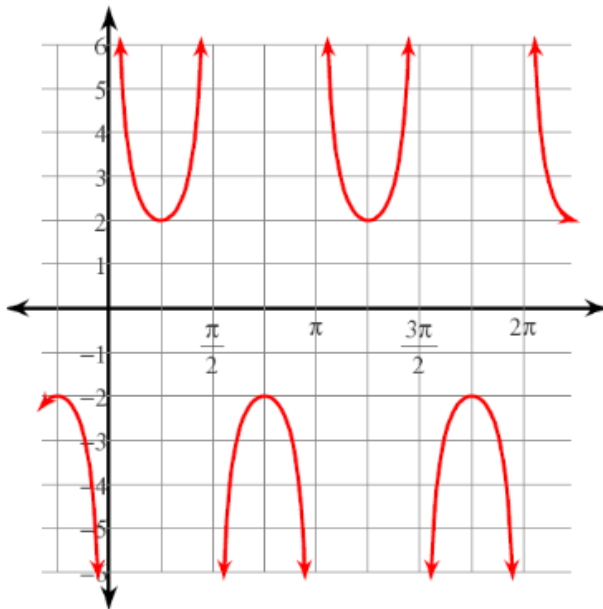
3. Write a cosecant equation for the periodic function.



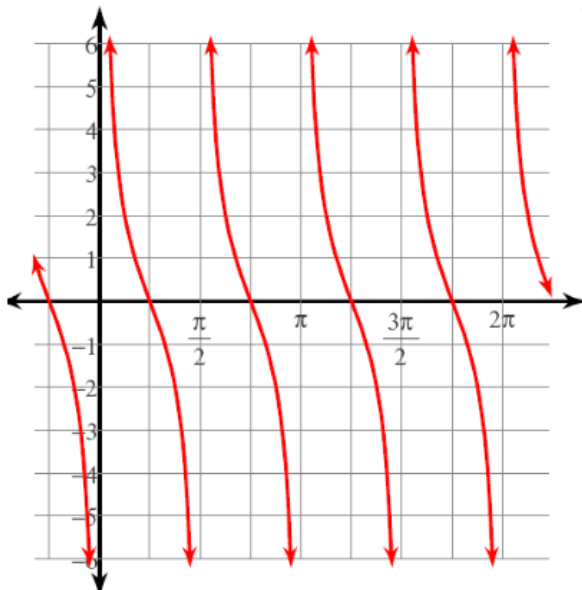
4. Write a sine equation for the periodic function.



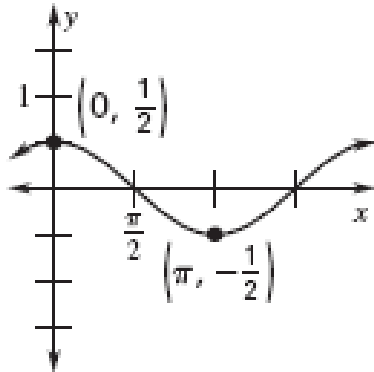
5. Write a cosecant equation for the periodic function.



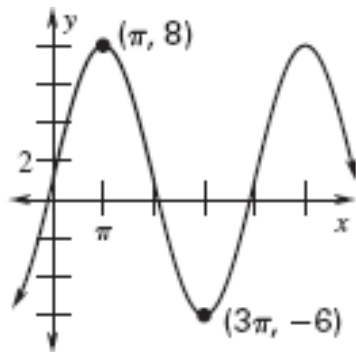
6. Write a cotangent equation for the periodic function.



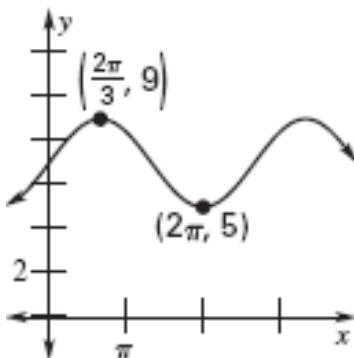
7. Write a sine equation for the periodic function.



8. Write a sine equation for the periodic function.

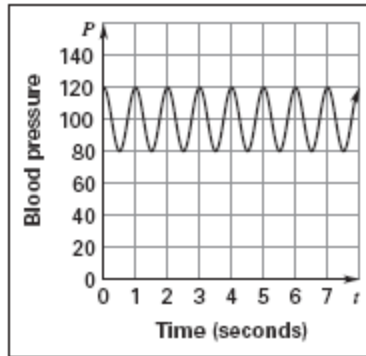


9. Write a cosine equation for the periodic function.

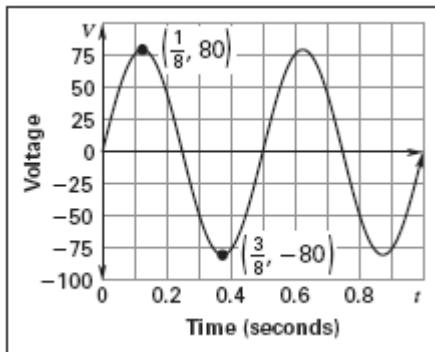


10. Which equation represents the graph of a person's blood pressure shown at the right?

- A. $P = 100 - 20 \cos(2\pi t)$
- B. $P = 100 + 20 \cos(2\pi t)$
- C. $P = 120 + 20 \sin(2\pi t)$
- D. $P = 100 - 20 \sin(2\pi t)$



11. A circuit has an alternating voltage of 80 volts that peaks every 0.25 second. Use the graph shown below to write a sinusoidal model for the voltage V as a function of the time t (in seconds).



12. The hourly temperature at Portland, Oregon, on a particular day is recorded below.

| | | | | | | | | | | | |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| 1 A.M. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 Noon |
| 46° | 44° | 43° | 41° | 40° | 40° | 41° | 43° | 46° | 52° | 65° | 69° |
| 1 P.M. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 Midnight |
| 72° | 74° | 75° | 75° | 77° | 75° | 74° | 70° | 62° | 55° | 51° | 48° |

a. Use $t = 1$ at 1 A.M. to write a sinusoidal function that models this temperature variation.

b. What is the model's temperature at 10 A.M.? Compare this to the actual value.