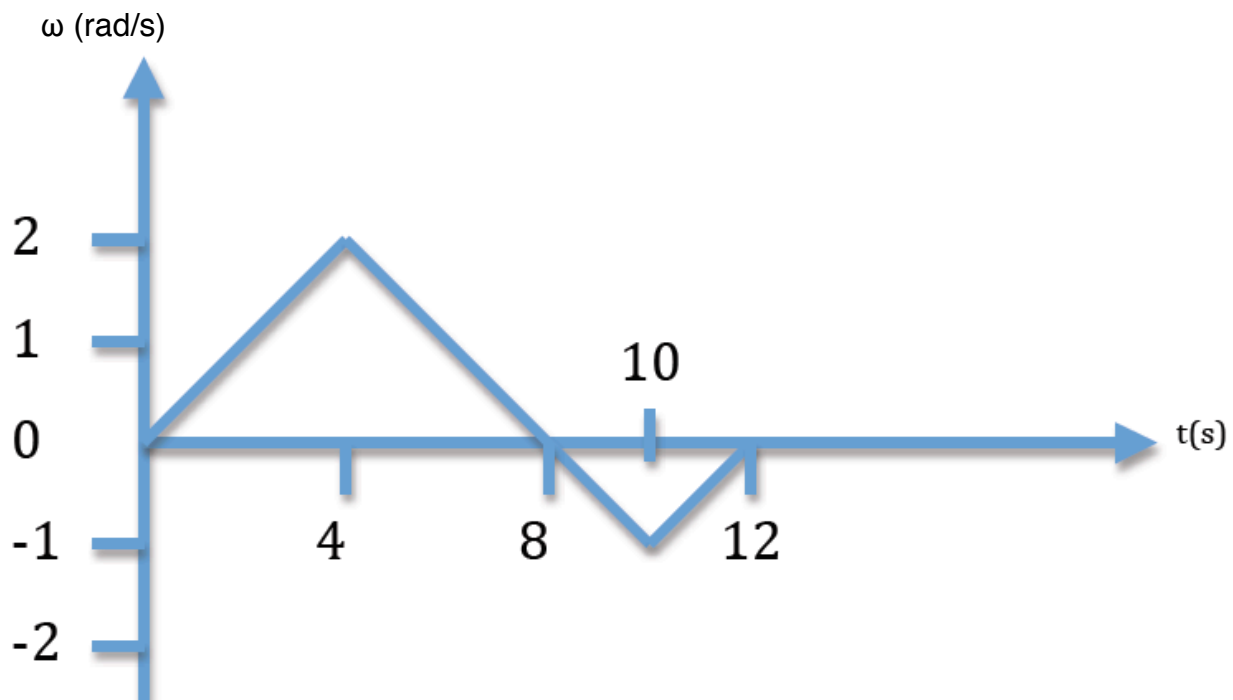


Ceiling fan

The diagram below shows the angular velocity ω of a ceiling fan of radius 50. cm that is turned on for 4.0 seconds, then switched into reverse for 6.0 seconds, then switched back into forward for 2.0 more seconds.



- What is the angular acceleration α of the fan when it is in forward?
- What is the angular acceleration α of the fan when it is in reverse?
- How many revolutions has the fan made at 12.0 seconds?
- Draw a graph of the angular position θ (in radians) vs. time.
- What is the speed of a bug on the outside of the fan at $t = 6.0$ seconds?