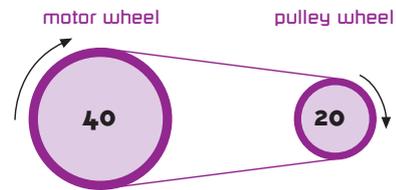
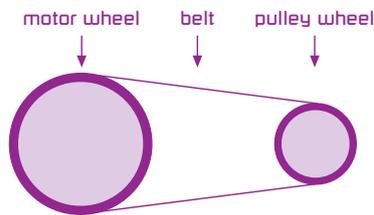


Pulley Power



ACTIVITY

A pulley is a wheel turned by a belt that goes around another wheel. The second wheel is connected to a motor.

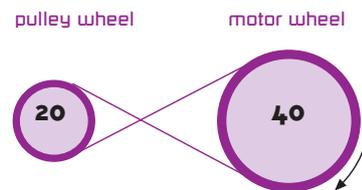


This motor wheel has a circumference of 40 centimetres.

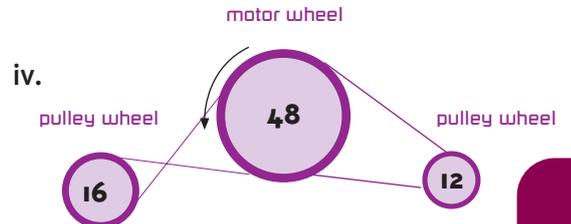
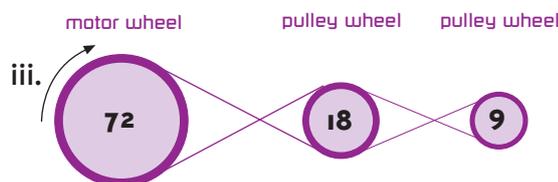
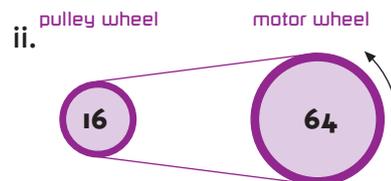
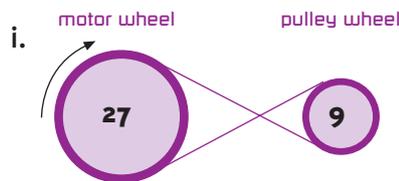
This pulley wheel has a circumference of 20 centimetres.

As the motor wheel turns, the pulley wheel will turn in the same direction twice as fast.

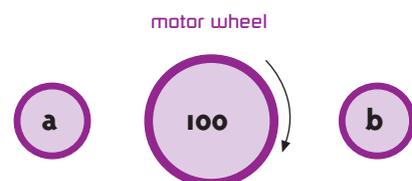
1. What will happen to the pulley wheel in this diagram as the motor wheel turns once clockwise?



2. In each diagram below, each pulley wheel is marked with a number giving its circumference.
 - a. How many turns will each pulley wheel make as the motor wheel turns once?
 - b. Will the pulley wheel turn clockwise or anticlockwise?



3. Michelle the engineer wants pulley wheel **a** to turn in an anticlockwise direction four times faster than the motor wheel. She wants pulley wheel **b** to turn five times faster in a clockwise direction.



- a. What should the circumference of each wheel be?
- b. Draw a diagram to show how each belt should look.