NAME_____

1. A rivet is used to link the two arms of a can opener. What are the characteristics of this link?

Explain each characteristic.
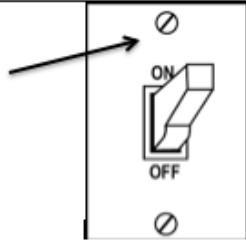
    A. Direct or indirect?

_____

_____

    B. Rigid or flexible?

_____

_____

    C. Removable or non-removable?

_____

_____

    D. Complete or partial?

_____

_____

2. Name the characteristics of each of the links below.

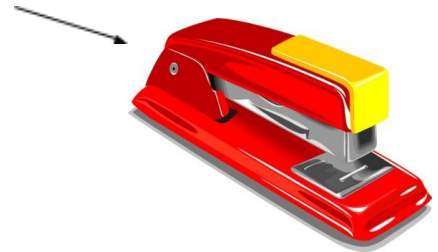|	

3. Consider the guides on the objects below.

a) What type of guide is the nut in the C clamp?
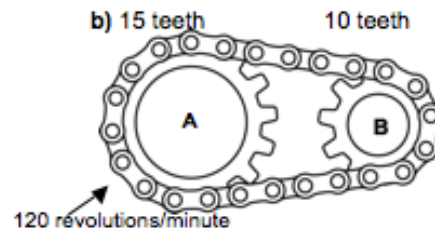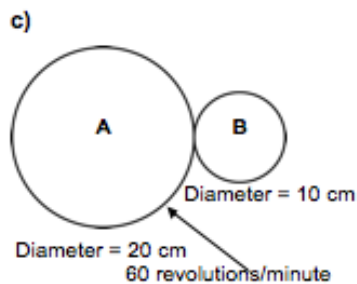
_____

bolt

nut
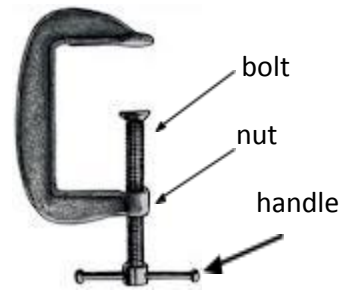
handle

b) What type of guide is the stapler handle?

_____

4. A company has lost its computer data on the rotational speed of the B components in the systems below. Using the information provided in the drawings of these systems, calculate the rotational speed of the B components.

a)

B   A

46 revolutions/minute

_____

b) 15 teeth   10 teeth

A   B

120 révolutions/minute

_____

c)

A   B

Diameter = 10 cm

Diameter = 20 cm
60 revolutions/minute

_____

d)

Diameter = 4 cm

A   B

Diameter = 72 cm
5 revolutions/minute

_____
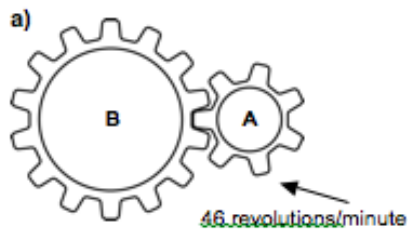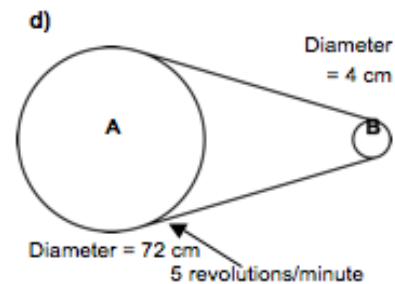
5. Write the names of each of the systems above and determine the speed ratios for each? (Assume gear A is always the driver)

a) _____   b) _____

c) _____   d) _____

6. A motion transmission system consists of a driver and a driven component. Both these parts rotate in the same direction. The driven component B spins 5 times faster than driver component A. The driven component has 4 teeth.

a. Name this type of transmission system._____

b. Draw the motion transmission system below proportionally and with the correct number of teeth, then calculate the speed ratio. SHOW YOUR WORK!

7. In a car engine, the serpentine belt is used to transmit motion between the parts. One of these engines is pictured below.

Give the direction of rotation of the other parts below. The alternator turns **counterclockwise.**

A0007699
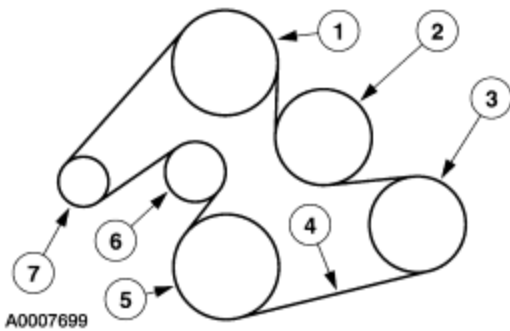
1- Power steering pump _____

2- Water pump _____
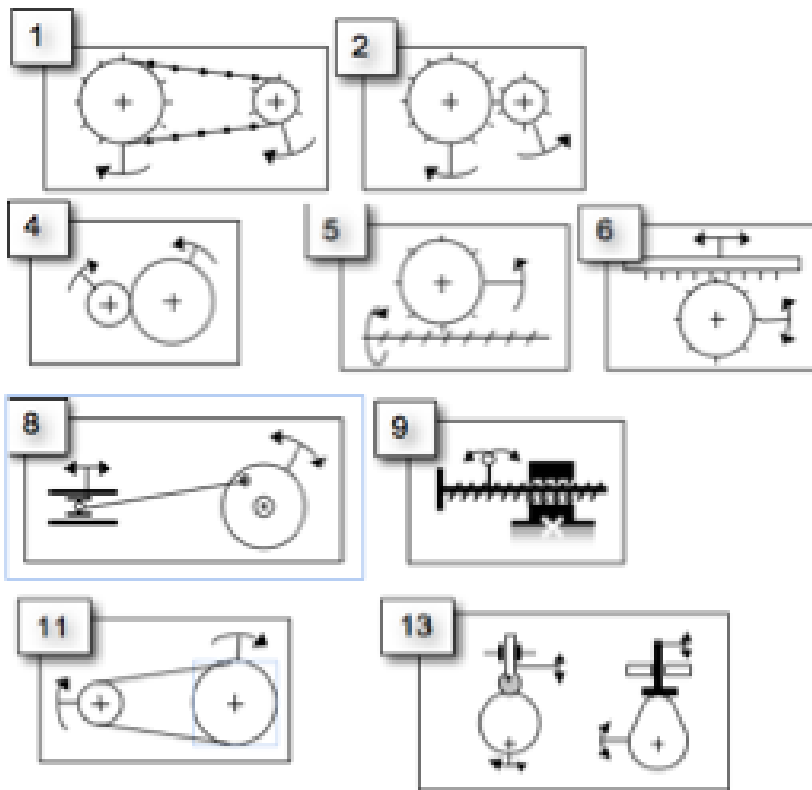
3- Alternator _____

4- Serpentine belt _____

5- A/C compressor_____

6- Tensioner _____

7- Idler pulley _____

8. Draw the correct symbol for each of the components listed below:

Screw or worm	
Rack	
Gear or pinion	
Cam	
Eccentric	
Pulley or friction wheel	

9. Name each of the systems shown above and indicate whether they are transmission or transformation systems.

#	Name of System	Transmission/Transformation
1		
2		
4		
5		
6		
8		
9		
11		
13		