**Name..... Group..... Mark.....**

## 8.13 - Cam Toy: Pulleys

Pulleys are developed from wheels. They are joined by belts and are used to transmit ***rotary motion*** and force from the **driver** shaft to the **driven** shaft. Pulleys can be seen in many workshop and factory machines.

Use models to investigate simple pulley systems. Record your observations in the boxes below. Use circles to represent the pulleys. Add arrows to show directions and draw in the belts.

| | |
|---|---|
| 1. Same direction, same speed. | 2. Same direction, different speed. |
| 3. Opposite direction, same speed. | 4. Opposite direction, different speed. |

Notice how much the speed of the driven pulley changes.
This can be found out by measuring the diameters (width) of the pulleys.
For the model pulleys the large one is 2 times bigeer than the small one. This ratio is called the VELOCITY RATIO.

Write the velocity ratio for each example next to its drawing.
If the large pulley turns once how mamy times does the small pulley turn.