## Retro-reflector or mirror retroreflector

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## Słowa kluczowe:

lustro,odbicie

## DZIEDZINA:

Physics,Optics

## Cel doświadczenia:

How to position flat mirrors in order to obtain a retroreflector, i.e. a system that reflects light directly to the sender regardless of the direction from which the light falls.

## Spis materiałów:

1. three square, flat mirrors of any size (for design considerations it would be good if the mirror edge was approx. 10-20 cm)
2. sticky tape or plasticine (for temporary bonding of the mirrors)
3. a laser pointer or a torch with a concentrated beam of light

## Etapy realizacji:

1. Position two mirrors and join their edges together (you can bond them using sticky tape of plasticine).
2. Illuminate one of the mirrors with laser light or a torch.
3. Change the relative positioning of the mirrors so that the light should be reflected towards the source of light (laser, torch) regardless of the direction of illumination.
4. Build a similar system using three mirrors

## Pytania do doświadczenia:

1. By means of what other optical elements can the retroreflector effect be achieved?
2. Where are reflexive elements (retroreflectors) used?

## Opis zjawiska:

## Ciekawostki:

1. Reflective elements are made up of mini retroreflectors that reflect light and increase visibility, e.g. on the road.
2. In order to improve safety, since $1^{\text {st }}$ September 2014 pedestrians moving on roads outside built up areas have been obliged to wear reflexive elements after dark.
