



important hints:

- Watch movie from 5:00 AM and answer question until 23:00.
- Solution movie and points provided at 8:00 the next morning.
- Answer weekend questions (Sat & Sun) until Monday evening 23:00.
- Answer **exactly once**. Answers cannot be changed.
- In case of questions, ask them via contact form on webpage **before** answering.
- Additional hints might be given in the „**hint of the day**“ (red bauble on webpage).
- Start with two jokers. Gain another joker by watching 10 solution movies. Jokers are played automatically in case of need.
- **Audience Joker**: See how the other participants voted and then decide. You can use this joker only once.
- **50:50-Joker**: Reduce the selection to only two options, one correct one and another one. You can use this joker only once.

Shopping list for PiA[®] – Physics in Advent 2022 www.physics-in-advent.org

- 1.)
 - 1 table tennis ball
 - 1 bottle with a 1-2.5 cm opening
 - water
- 2.)
 - table tennis ball
 - plastic cup with flat bottom, without rim at the bottom
 - water
- 3.)
 - baking tray or bottom of a cake tin
 - water tap or water jug
- 4.)
 - a CD
 - glue, e.g. hot glue gun
 - balloon
 - sleeve of an Iso tube from the DIY store or a toilet roll or a small plastic tube (2-3 cm diameter, 3-5 cm height), e.g. tube with effervescent tablets.
- 5.)
 - water glass
 - spoon
 - effervescent powder (from a bag or a tablet
- 6.)
 - grated into powder)
 - round wooden pencil, preferably without varnish
 - key ring
- 7.)
 - aluminium craft foil or aluminium foil.
 - scissors
 - shish kebab
 - tea light
 - small glass that the tea light fits into
- 8.)
 - 2 straight rails of a wooden railway
 - a 1-2 cm thick object (e.g. a wooden rail) to place underneath the track
 - 2 identical balls or glass marbles
- 9.)
 - two DIN-A4 sheets of paper
 - if possible a printer
- 10.)
 - smartphone
 - water sprayer



11.)

- 2 A4 sheets of paper
- printer

12.)

- about 3m long parcel string
- scissors
- a string attachment (e.g. door, cupboard, wooden block)

13.)

- water tap or water in jug
- narrow, tall glass with steep walls (vase or champagne glass)
- smartphone on which the "PHYPHOX" app is installed

14.)

- a raw chicken egg
- scissors
- large PET bottle (preferably 1.5 l)
- balloon
- 1 drop of oil
- piece of adhesive tape

15.)

- the chicken egg from task 15
- two rolls of adhesive tape (2-3 cm inside diameter, full or empty)
- breakfast board
- 3 times 1l tetrapack of a liquid.

16.)

- styrofoam (is broken down into small balls).
- a cardboard tube, e.g. from household tissues or two toilet paper rolls
- hairdryer

17.)

- round PET bottle
- water
- paper clip
- adhesive tape

18.)

- table tennis ball
- water
- water glass or small bowl with straight rim

19.)

- kitchen sieve with 0.5-1 mm holes
- kitchen sieve with about 3 mm holes (e.g. salad or pasta strainer)
- water glass that you can cover completely with one hand.
- water

20.)

- glass milk bottle
- hard-boiled egg
- hairdryer
- sheet of paper
- lighter or matches

21.)

- hourglass
- kitchen scales

22.)

- ruler with a hole
- a glass ball
- glue strips
- a sheet of paper
- pencil

23.)

- biros
- sewing thread

24.)

- a button with holes
- sewing thread