Fixed and variable costs
Which of the following costs are fixed and which are variable?
- costs of direct materials or supplies,
- cost of goods sold,
- insurance,
- plant and equipment expenses,
- shipping charges,
- delivery charges,
- salary of permanent full-time workers,
- wages of part-time or temporary employees,
- sales or production bonuses,
- rent,
- business licenses,
- phone bill.

Break-even point (BEP)
„Trik” Ltd. produces funny pencils. The total costs estimated for the sales volume of 500,000 pencils per year are as follows (in PLN):
1. costs of direct materials 650,000
2. plant and equipment expenses 100,000
3. electricity* 50,000
4. rent 30,000
5. salary of permanent full-time production workers 140,000
6. salary of permanent full-time administrative staff 80,000
7. sales bonuses 180,000
8. production bonuses 70,000
9. insurance 10,000
10. packaging 50,000
11. phone bill 90,000
* energy is used mostly by production process

The unit price is 3.50 PLN.

How many pencils do they have to produce and sell to cover their costs?

\[ FC = 450,000 \text{ PLN}, \quad VC = 1,000,000 \text{ PLN}, \quad VC/unit = 2 \text{ PLN}, \quad S = 3.50 \text{ PLN} \times 500,000 = 1,750,000 \text{ PLN} \]
\[ BEP = 300,000 \text{ pencils} \]