



## Problem of the Week

### Problem A and Solution

#### Saving Up

#### Problem

Fionnlay earns \$8 each week by walking the neighbour's dog. Starting in the second week, Fionnlay earns an extra \$3 by helping maintain the community garden every other week. He is saving all of his earnings for a bicycle, which costs \$157. He will also need a helmet which costs \$24, a bike horn which costs \$16, and a bike light which costs \$9. All prices include taxes. Fionnlay keeps track of the money he has earned.

- How much money will Fionnlay have saved after 8 weeks?
- How much money will Fionnlay have saved after 15 weeks?
- How long will it take him to save enough money to buy the bike and its accessories?

#### Solution

One way to solve this problem is to create a table that records the total that Fionnlay has saved each week. In the odd-numbered weeks, the total will increase by \$8. In the even-numbered weeks, the total will increase by  $\$8 + \$3 = \$11$ .

We will also need to know how much money Fionnlay needs to save by calculating the total cost of the bike and its accessories. We can do this by adding  $\$157 + \$24 + \$16 + \$9 = \$206$ .

Using the table, we can now answer the questions.

- Fionnlay will have saved \$76 after 8 weeks.
- Fionnlay will have saved \$141 after 15 weeks.
- Fionnlay will need 22 weeks to save enough money for the bike and its accessories.

Week	Increase (in \$)	Total Savings (in \$)
1	8	8
2	11	19
3	8	27
4	11	38
5	8	46
6	11	57
7	8	65
8	11	76
9	8	84
10	11	95
11	8	103
12	11	114
13	8	122
14	11	133
15	8	141
16	11	152
17	8	160
18	11	171
19	8	179
20	11	190
21	8	198
22	11	209