

WARM UP: MAJOR ROBBERY

1. After many weights were stolen you are left only with the weights $\overset{\bullet}{1}$, $\overset{\bullet}{2}$, $\overset{\bullet}{4}$ and $\overset{\bullet}{8}$. Can you balance 18 kilograms using each weight no more than once? Why or why not? What weights can you balance?

2. Someone stole the 1 kilogram weight. What kind of weights can you balance now? (You still have all of the weights $\overset{\bullet}{2}$, $\overset{\bullet}{4}$, $\overset{\bullet}{8}$, $\overset{\bullet}{16}$, ...).