1 This shape includes 12 matchsticks. (To solve these puzzles all matches remaining must connect to other matches at both ends.)
a Remove 2 matchsticks to form 2 squares.
b Move 3 matchsticks to form 3 squares.
2 a Use 9 matchsticks to form 5 equilateral triangles.

b Use 6 matchsticks to form 4 equilateral triangles.
3 Who am I?
I was a female mathematician famous for her work and publications on geometry. Use your answers to the following to unlock the puzzle code.

$\begin{array}{lllll}\overline{78} & \overline{68} & \overline{60} & \overline{128} & \overline{130}\end{array}$
$\begin{array}{llllllll}\overline{128} & \overline{90} & \overline{42} & \overline{96} & \overline{90} & \overline{144} & \overline{53} & \overline{70}\end{array}$
$\begin{array}{lllll}\overline{28} & \overline{144} & \overline{120} & \overline{36} & \overline{78}\end{array}$
4 Find the angle between the hour and minute hands on a clock at these times.
a 11:30 am
b $7: 45 \mathrm{pm}$
c $6: 55 \mathrm{pm}$
d $\quad 2: 34 \mathrm{am}$


