1) a) $312 \mathrm{~cm}^{2}$
b) $520 \mathrm{~m}^{2}$
c) $15 m^{2}$
2) Answers will vary but may include rectangles with the following measurements: $1 \mathrm{~cm} \times 30 \mathrm{~cm}, 2 \mathrm{~cm} \times 15 \mathrm{~cm}, 3 \mathrm{~cm} \times 10 \mathrm{~cm}, 5 \mathrm{~cm} \times 6 \mathrm{~cm}$
3) $\bigcirc$ If a square and a rectangle whose sides are not all equal have the same area, they will have the same perimeter.
They could have different perimeters.
() A square can never have an area greater than $9 \mathrm{~cm}^{2}$ but less than $16 \mathrm{~cm}^{2}$.

They could have sides of between 3 cm and 4 cm in length.
(V) If I cut an $80 \mathrm{~cm}^{2}$ rectangle into 2 new rectangles, they will have a combined area of $80 \mathrm{~cm}^{2}$.
2) 6 cm and 18 cm

1) Garage: $60 \mathrm{~m}^{2}$

Living Room: $144 \mathrm{~m}^{2}$
Hallway: $36 \mathrm{~m}^{2}$
Kitchen: $60 \mathrm{~m}^{2}$
Total Area: $300 \mathrm{~m}^{2}$
2) Children will find different solutions to this problem. The total area of the four rooms should be $300 \mathrm{~m}^{2}$.

