## 2 Patterns and algebra

| $\mathbf{1}$ | Each pentagon requires 5 matchsticks. How many matchsticks <br> would be needed to make 19 pentagons? |  |
| :---: | :--- | :--- |
| $\mathbf{2}$ | Ben buys a newspaper every day. How much would he spend in two <br> weeks if the newspapers are $£ 1.20$ each? |  |
| $\mathbf{3}$ | Each hexagon requires 6 matchsticks. How many hexagons can be <br> made with 108 matchsticks? |  |
| $\mathbf{4}$ | It takes a machine 3 minutes to fold a flat piece of cardboard into a <br> box shape. How many boxes can it produce in 4 hours? |  |


| $\mathbf{1}$ | Each octagon requires 8 matchsticks. How many complete octagons <br> can be made with 124 matchsticks? |  |
| :--- | :--- | :--- |
| $\mathbf{2}$ | A car travels 9.5 km per litre of petrol. How many kilometres would it <br> travel on 60 litres? |  |
| $\mathbf{3}$ | Aya estimates that each person will have three drinks. Hpw many 1 <br> litre bottles will she need for 20 people if each cup holds 250 ml? |  |
| $\mathbf{4}$ | Noah receives twice as much pocket money as Emily. If they <br> received $£ 24$ between them, how much did Noah receive? |  |

## Investigation

## Hand shakes

At the end of the Under 12's game, each of the 11 players shook hands with the 11 opposition players. How many hand shakes took place?


