Make Your Own Celebration Bunting

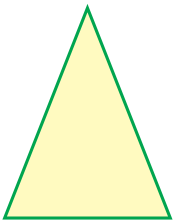
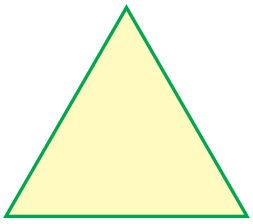
You will need:

- Scraps of wrapping paper and/or coloured paper or material
- A protractor
- A piece of card, e.g. the back of a cereal box
- Ruler
- Pencil
- Glue
- Scissors
- Ball of string
- Tape measure
- Drawing pins

Have you ever seen a string of little flags at a party or celebration? Why not make your own and practise measuring angles, identifying triangles and multiplying with fractions all at the same time?

What to do

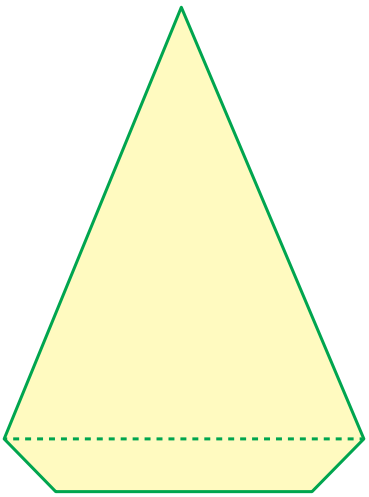
1. First make a triangle template to draw around to make all of your flags. Choose whether you want your bunting flags to be:

isosceles triangles (two sides and two angles the same)	or	equilateral triangles (all angles and sides the same)
		

2. Look at your ruler and choose a length between 14 and 18cm for the bottom edge, or base line, of your flags.
3. Place your piece of card with the long edge vertical. Leave a space at the bottom of about 3 – 4cm. Then, with your ruler, draw a horizontal line that's the length you've chosen for the baseline of each flag. Make each end of this line clear with a large dot.

4. Look at your protractor and plan the angles you want for the two bottom corners of your flags:
   - If you want an equilateral triangle, they need to be 60°
   - If you want an isosceles triangle, they need to be any other angle between 1° and 89°.

   Remember that the two angles need to be the same. They also can't be too big, or your triangle won't fit onto your paper. Try out a few and see what looks right on the paper.
5. Mark your angles and draw the sides of your triangle. If you need help, look at the 'How to draw your triangle' guide on pages 4 and 5.
6. You should now have a triangle on your card. Draw a flap attached to the bottom of the triangle, as in the picture below. Make sure that it tapers in at the corners, so that it won't stick out when you fold it over your triangle.



7. Cut out your triangle template, remembering to include your flap.
8. On a piece of wrapping paper or material, carefully draw around your template.
9. Cut out your paper or material flag with its flap.

Make Your Own Celebration Bunting (continued)

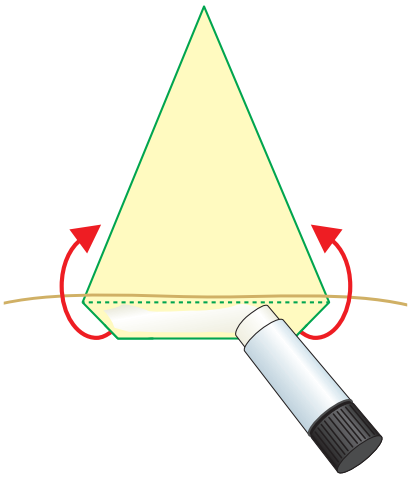
10. Use your template to draw and cut out as many flags as you want. If you know where you want to hang your bunting, you can work how many flags you'll need:

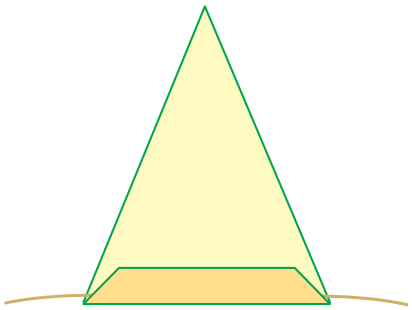
    Measure the distance over which you want your bunting to stretch.

    Multiply this by $1\frac{1}{2}$. This is the length of your bunting. Now, divide this new length by the length of the base line of your flags. The answer is the number of flags that you need.

11. Add 1 metre to the bunting length above. Cut off a piece of string this long.

12. Leaving a gap of about $\frac{1}{2}$ a metre at each end, fix each flag to your string by wrapping the flap over the string and gluing it to the back of the flag. Let the glue dry.

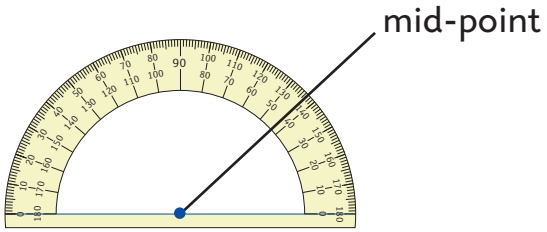




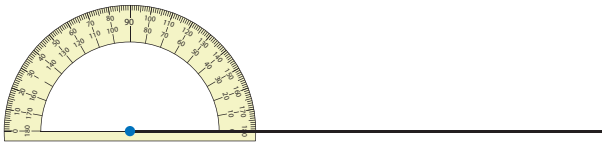
13. With an adult's help, use the ends of the string to hang up your bunting. Drawing pins may be useful to hold it in place and also to pin it up once or twice along its length.

How to draw your triangle

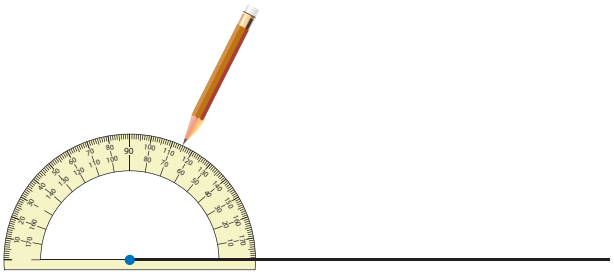
1. Find the zero line at the bottom of your protractor (the line that joins the two zeros on either side). Find the little circle that marks the mid-point of this line (marked 'mid-point' on the picture above).



2. Put this circle on top of one of the large dots at the ends of your flag's base line. Line up the zero line of the protractor with the base line of your triangle.

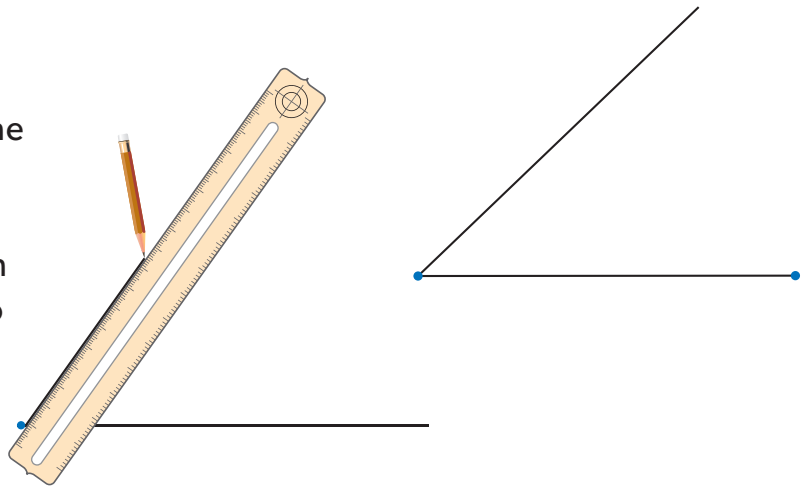


3. Look at the side of the protractor that's over your baseline. Find the zero at the end of the zero line and count up from there until you reach the number of degrees that you want your angle to be. (Make sure that you use the numbers that start at 0). When you find the correct number of degrees, draw a dot on your paper at this point on the edge of your protractor.

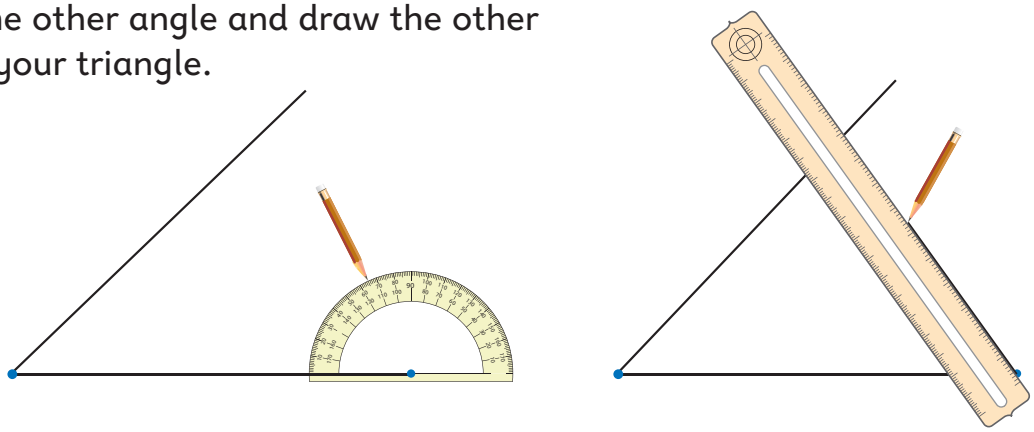


How to draw your triangle (continued)

4. Move the protractor out of the way. With your ruler, draw a line that joins the dot at the end of the base line to the dot that marks the correct angle and then continue the line on to the edge of the paper.



5. Do exactly the same on the other side to mark the other angle and draw the other side of your triangle.



6. The two new lines should cross over at a point on your paper. If they don't, you'll need to make the two angles smaller and draw the lines again.