

M52



15-20 minutes



- ❖ 2 Axis Line sheets (per child)



- ❖ For the Football Kit activity (per child): Red 'material' (strip of paper), a blue strip measure for shorts and a green strip measure for shirts



- ❖ For the Summer Clothes activity (per child): Yellow 'material' (strip of paper), a pink strip measure for shorts, a blue strip measure for tops, a green strip measure for dresses and a red strip measure for suits



- ❖ 6 tokens of each of the following colours: blue, green, pink, red (or use small paper shapes)
- ❖ A pencil and coloured pencils (per child)

## SHIRTS AND SHORTS



To develop techniques for comparing the results of measuring the same piece of material using different conventional measures

To practise measuring the same piece of material using two different conventional measures

To facilitate accurate representation of quantity on an axis line, without relying on counting

To practice the use of arcs to represent quantities on an axis line - to facilitate comparison of different measures being quantified



### Football Kit:

Show your child the pictures of the red shirt and shorts, and set the scene: *The local outfitter has been asked to make some football shirts and shorts for the local football team. The clothmaker says that the cloth for making the kit comes in fixed lengths. The outfitter needs to know how many shirts and how many shorts she can get from one length of the cloth so that she can work out how much cloth to order. Shall we see if we can help?*

Give your child the red 'material' (strip of paper), the green strip measure for shirts, the blue strip measure for shorts, an Axis Line sheet, coloured pencils and 6 blue and 6 green tokens.



Explain: *We can measure the number of shorts the outfitter can make from a piece of cloth using the blue measure. Each time we place the measure along the red material, we should take a blue token. When we get to the end of the strip, we count the number of tokens, marking one segment of the axis line with a blue pencil for each token and then drawing an arc back to the start of the axis line to show the total number of shorts that can be made from that red material. Then we should mark the arc with a symbol for shorts to avoid any confusion.*

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Your child can measure the same strip with measures of different length, record their results on an axis line and compare them.

Your child can use segments on an axis line to help them record the number of times a measure went into a piece of material on the axis line.

Your child can draw arcs on axis lines, from the point reached when they have finished counting the number of measures, to the 0, to show the total number of objects.

Your child can use drawings/symbols to label their arcs.



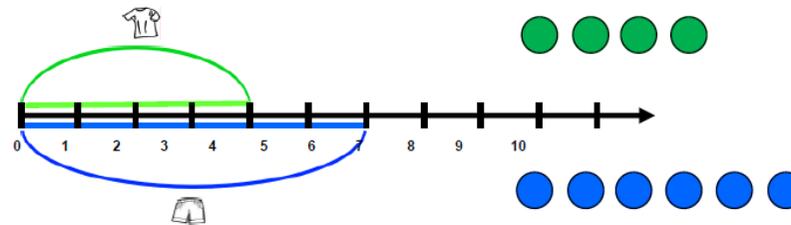
KEY TO LEARNING  
@HOME



# SHIRTS AND SHORTS – continued



Do what you have explained together, modelling parts of the process as necessary. Then ask your child to repeat the process using the green measuring strip to find out how many shirts can be made from one length of red material, and marking the total number of shirts that can be made from a piece of red material with a green arc on the axis line.



Now ask your child to use their axis line model to answer these questions: *How many shorts can the outfitter get from one length of cloth? How many shirts can she get from one length of cloth – the same length of cloth? Which is more, and which is fewer, the number of shirts or the number of shorts? Which strip went into the length of cloth more times, the shirt strip or the shorts strip? Which strip was longer?*

Summarise: *The longer strip went into the material fewer times – the longer the measure, the fewer items of clothing we can make, because each item uses up more of our material.*

## Summer Clothes:

Tell your child: *The outfitter was very happy with the information that you found out for her about how many shirts and shorts can be cut from one piece of cloth! In fact, she told her friend who is a dressmaker all about it and now he wants some help too! Show your child the yellow summer clothes and add: He has been asked to make some summer clothes for a shop. The clothmaker says that the cloth for making the clothing comes in fixed lengths. The dressmaker needs to know how many shorts, tops, dresses or summer suits he can make from one length of the cloth.*

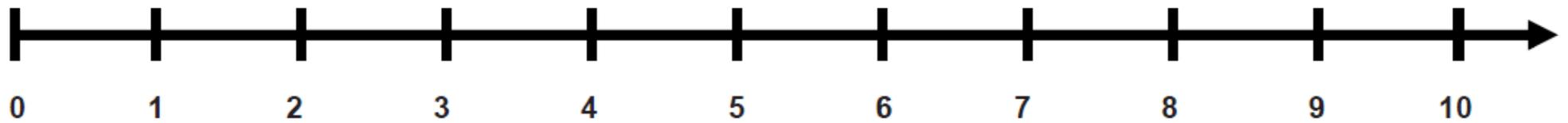
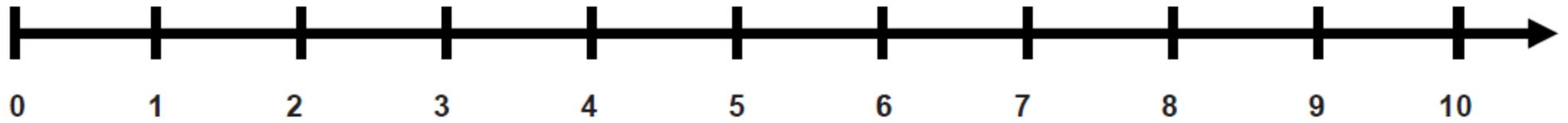
Give your child the yellow 'material' (strip of paper), the pink strip measure for shorts, the blue strip measure for tops, the green strip measure for dresses, the red strip measure for suits, another Axis Line sheet, coloured pencils and pink, green, blue and red tokens (6 of each colour).

Repeat the procedure from the Football Kit activity, for measuring and recording the number of garments of different types that can be made from one length of material. When your child has finished, they should have an axis line with four labelled arcs, one for shorts, one for dresses, one for tops and one for summer suits (encourage them to draw two of the arcs above and two below the line).

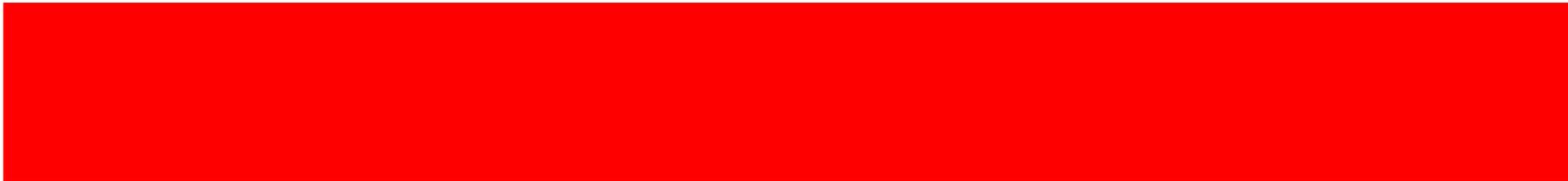
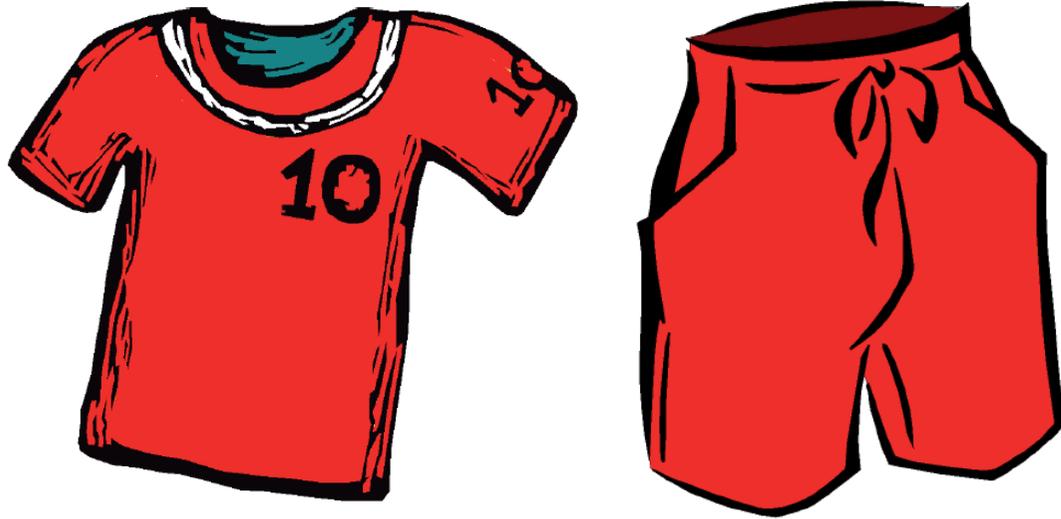
As before, ask them to use their axis line model to answer questions about numbers of garments: *How many shorts can the dressmaker get from one length of material? How many tops can he get from one length of material? How many dresses can he get from one length of material? How many summer suits can he get from one length of material? Which of the strips went into the length of material more times? (The shortest one.) Which of the strips went into the length of material fewest times? (The longest one.)*

Summarise: *The longer the strip, the fewer the number of times it goes into the material, and the fewer items of clothing we can make. Dresses need more material than shorts. So we can make fewer dresses than shorts from the same piece of material.*

Tell your child that the dressmaker really appreciated this help, just like the football kit outfitter did.



For the Football Kit activity – cut out each item of clothing and each coloured strip separately.



For the Summer Clothes activity - cut out each items of clothing and each strip separately.

