

By the end of the year, your child will be meeting the Year 8 mathematics standard if ...

... they are solving realistic problems using their growing understanding of number, algebra, space, measurement, probability and statistics.

They will use multiplication strategies to solve problems involving fractions, decimals and percentages. They will be developing and drawing from various strategies to investigate mathematics and will be able to explain different ways to solve problems.

To meet the standard, your child will be learning to:

- solve problems with decimals and integers
- solve problems involving percentages such as percentage increase and percentage decrease, as well as problems involving profit and loss
- create and use tables, graphs and rules to show linear and non-linear relationships (see example problem)
- solve problems involving time and time zones
- find perimeters and areas of 2D shapes and volumes of rectangular and triangular prisms
- explore transformation and discuss how shapes and patterns change after a transformation
- gather and use data that gives several pieces of information (e.g. age and size)
- sort data and display in different ways, and discuss patterns and trends
- use fractions to discuss the likelihoods of outcomes involving chance.

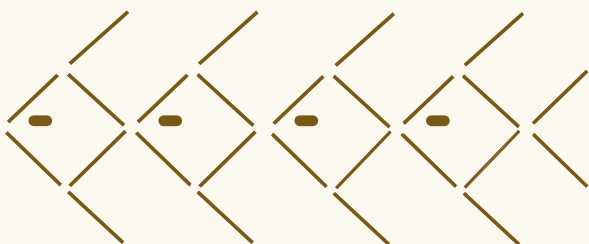
FOCUS ON NUMBER

During Year 8 at school, about half of mathematics teaching time will focus on number learning.

This is a small part of the skills and knowledge your child is learning in order to meet this standard. Talk to the teacher for more information about your child's learning.

MATHEMATICS PROBLEMS AT THIS LEVEL MIGHT LOOK LIKE THIS:

With 26 matchsticks you can make 4 fish in this pattern. How many fish can you make with 140 matchsticks? Write an equation that gives the rule for the number of matchsticks you need for a given number of fish.



I worked out that one fish uses 8 matches, then every fish after that uses 6. So:

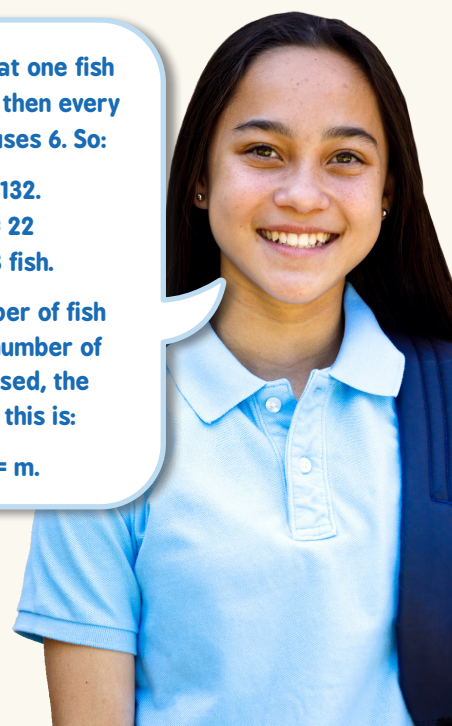
$$140 - 8 = 132.$$

$$132 \div 6 = 22$$

$$22 + 1 = 23 \text{ fish.}$$

If 'f' is the number of fish and 'm' is the number of matchsticks used, the equation for this is:

$$6 \times f + 2 = m.$$



Ask the teacher what your child is doing in mathematics. Talk about how you can work together to support your child's learning.

MATHEMATICS AT HOME

Talk together and have fun with numbers and patterns

Here are some things you can do with your child.

- Find and connect numbers around your home and on family outings. For example, how much will it cost to fill the car with petrol at a local petrol station if the tank is empty? (How many litres are needed to fill the tank? What is the cost per litre?)
- Talk about sales – 15% off, 33% off, 20% off, half price. Look for the best value. What would the price of the item be after the discount? Is it better to buy two items and get one free or get 25% off the price of the items?
- Work out how to budget pocket money, plan ahead to open a savings account or reach a savings target. Talk about earning interest. Work out what interest would be earned using different savings schemes.
- Work out the area of your home, community meeting place or local park – how many square metres is it?
- Talk about goals and plan ahead to budget for items for your child or for others.
- Do complicated number puzzles.

SUPPORT YOUR CHILD.

Parents, family and carers like you play a big part in your child's learning every day – you can support and build on what they learn at school.

Involve your child in easy, everyday activities like these

- Plan how to make a dish or a full meal for a family (or even a community) event. Work out the cost of making it at home versus buying it already made. Plan the preparation and cooking time, focusing on the ingredients.
- Plan what proportion of their own time should be spent on a range of things they do in a week, and why. Include things such as homework, sleep, TV, sport and music.
- Watch documentaries, which are often full of facts and information that involve mathematics (e.g. numbers and percentages). Identify these things and talk about them.
- Read the newspaper to find articles or advertisements featuring graphs or tables that may be misleading.

Being positive about mathematics is really important for your child's learning – even if you didn't enjoy it or do well at it yourself at school.

Talk with your child's teacher to understand what they are learning about in mathematics and what the learning is in the homework they are doing.



THE WAY YOUR CHILD is learning to solve maths problems may be different to your own experience. Ask questions. Get your child to show you how they do it and support them in their learning.

FOR SCHOOL HOLIDAYS/WEEKENDS/RAINY DAYS

Here are some suggestions for what you and your child can do together.

- Play games. Find new card games and board games that use strategy.
- Calculate the chance of your child's favourite team winning a season. Investigate how many points it needs and work out what its competitors need as well. Work out batting or goal kicking averages.
- Play outdoor sports/games such as skateboarding, frisbee, touch rugby, AFL football, cricket, soccer, tennis, netball.
- Plan and perform a dance. Draw up the outline of the dance steps on graph paper so you can teach them to other people.
- Make a present or gift for someone using scrapbooking, potted plants, quilting, collage, painting, carving, knitting, sewing or carpentry.
- Plan for when you have saved \$10/\$20/\$30. What would be the best use of that money for a day out?

