Mathematics

WORK SAMPLE PORTFOLIOS

These work sample portfolios have been designed to illustrate satisfactory achievement in the relevant aspects of the achievement standard.

The December 2011 work sample portfolios are a resource to support planning and implementation of the Foundation to Year 10 Australian Curriculum in English, Mathematics, Science and History during 2012. They comprise collections of different students' work annotated to highlight evidence of student learning of different aspects of the achievement standard.

The work samples vary in terms of how much time was available to complete the task or the degree of scaffolding provided by the teacher.

There is no pre-determined number of samples required in a portfolio nor are the work samples sequenced in any particular order. These initial work sample portfolios do not constitute a complete set of work samples - they provide evidence of most (but not necessarily all) aspects of the achievement standard.

As the Australian Curriculum in English, Mathematics, Science and History is implemented by schools in 2012, the work sample portfolios will be reviewed and enhanced by drawing on classroom practice and will reflect a more systematic collection of evidence from teaching and learning programs.

THIS PORTFOLIO – YEAR 6 MATHEMATICS

This portfolio comprises a number of work samples drawn from a range of assessment tasks, namely:

Sample 1   Fraction Poster
Sample 2   Chance – Spinners
Sample 3   Maths investigation
Sample 4   Numbers – Mixed operations
Sample 5   Measurements and geometry – Rectangular prisms
Sample 6   Financial mathematics – Designing meal options
Sample 7   Numbers and place value – Everyday integers
Sample 8   Plotting points on the Cartesian plane
Sample 9   Map of the run course
Sample 10   Fractions investigation

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This portfolio of student work shows understanding of fractions as representations of a decimal and a percentage (WS1, WS10) and ability to order fractions on a number line (WS7). The student writes correct number sentences using a variety of skills and demonstrates the use of integers in real situations (WS7). The student undertakes activities to describe the position of points on the Cartesian plane (WS8), uses scaled instruments to measure lengths and constructs rectangular prisms to establish methods of calculating volume (WS5, WS9). The student determines strategies for comparing theoretical and experimental probability (WS 2) and evaluates results to draw conclusions. The student undertakes an authentic investigation based on experience to demonstrate their understanding of timetables, graphical representations (WS3) and surveys and uses knowledge of percentages and decimals in an investigation into purchasing and discounts (WS6).

The following aspects of the achievement standard are not evident in this portfolio:

- *recognise the properties of prime, composite, square and triangular numbers*
- *make connections between the powers of 10 and the multiplication and division of decimals*
- *make connections between capacity and volume*
- *solve problems involving length and area*
- *describe combinations of transformations*
- *solve problems using the properties of angles*
- *evaluate secondary data displayed in the media.*

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Work sample 1:
Fraction poster

Relevant parts of the achievement standard

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media.

Students locate fractions and integers on a number line. They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students list and communicate probabilities using simple fractions, decimals and percentages.

Summary of task

Students were asked to select a fraction and create a poster of their findings which they presented in class. They were asked to represent the fraction both as a decimal and percentage.

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Work sample 1:
Fraction poster
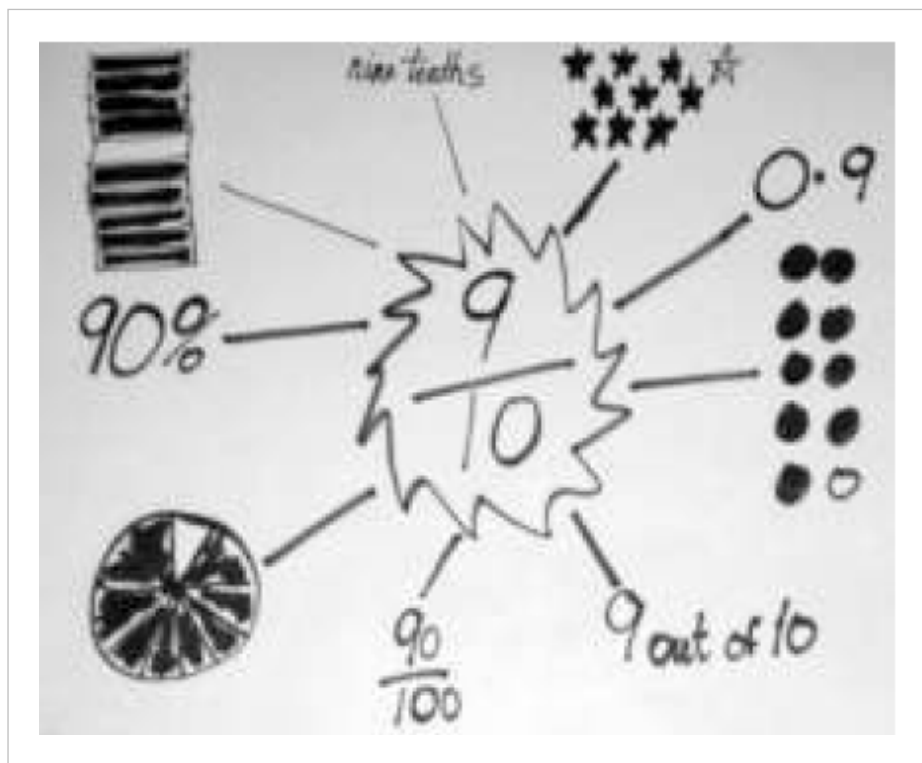
Annotations

Represents an equivalent fraction, decimal and percentage in various forms.

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Work sample 2:
Chance – Spinners

Relevant parts of the achievement standard

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media.

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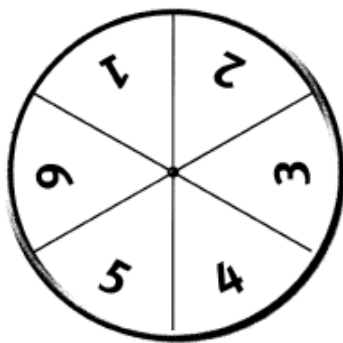
Summary of task

In this activity students took turns in a game involving a spinner and completed a set worksheet.

Students worked in pairs and recorded the differences between their scores after spinning a number on the spinner. They recorded the relative frequency of the results and they ordered their results from most likely to least likely. They made comparisons between theoretical and experimental probabilities and drew conclusions about the fairness of the game.

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Work sample 2:
Chance – Spinners

Annotations

Records relative frequency.

Take a spin

Game	Player A (0, 1 or 2)	Player B (3, 4 or 5)
1	✻✻ ✻✻✻	✎✎
2	✻✻✻ ✻✻✻	✻✻✻ ✎✎✎
3	✻✻✻ ✻✻✻	✎✎
4	✻✻✻ ✻✻✻	✻✻✻
5	✻✻✻ ✻✻✻	✻✻✻
6		

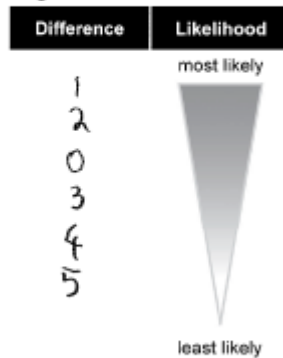Graph 1: Frequency of each difference

2. a) Complete the Frequency column in Table 1 below.

   b) In the Likelihood column, express the likelihood of spinning each difference as a common fraction.

   c) Order the differences from most likely to least likely in Diagram 1.

Table 1: Likelihood of spinning each difference

Difference	Frequency	Likelihood
0	13	$^{13}/_{72}$
1	20	$^{20}/_{72}$
2	17	$^{17}/_{72}$
3	11	$^{11}/_{72}$
4	10	$^{10}/_{72}$
5	1	$^{1}/_{72}$
Total	72	

Diagram 1: Order of likelihood

Difference	Likelihood
1	most likely
2	
0	
3	
4	
5	least likely

Communicates relative frequency as fractions.

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Work sample 2:
Chance – Spinners

### Exploring outcomes and theoretical likelihood

This grid shows all **possible outcomes** when using two spinners and finding the difference. Use the grid to answer the questions below.

	Player B					
	1	2	3	4	5	6
1	0	1	2	3	4	5
2	1	0	1	2	3	4
3	2	1	0	1	2	3
4	3	2	1	0	1	2
5	4	3	2	1	0	1
6	5	4	3	2	1	0

(Player A down the side)

The difference of 4 has 4 possible outcomes.

These can be written as:

(1, 5) (2, 6) (5, 1) (6, 2)

3. a) How many possible outcomes have a difference of 2? ......**8**......

b) Write all the possible outcomes that have a difference of 3.

(1, 4)(5, 2)(6, 3)(2, 5)(4, 1)(3, 6)

c) Complete Graph 2 by using a cross (✘) to indicate the number of outcomes for each difference.

Graph 2: Number of outcomes for each difference

(Graph with y-axis "Number of outcomes" from 1 to 10, x-axis "Difference" from 0 to 5, with crosses plotted)
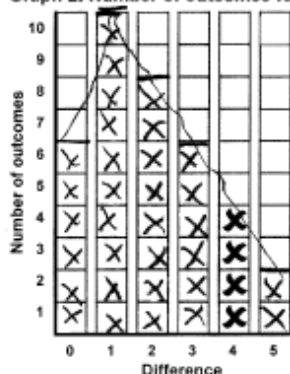
The possible outcomes for the difference of 4 have been completed for you.

Annotations

Compares expected likelihood of outcomes with actual (experimental) outcomes.

Records their findings in a display.

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Work sample 2:
Chance – Spinners

Annotations

Look at the shape of Graph 1 on page 4 and Graph 2 on page 6, then complete the sentence below.

4. The two graphs may not be the same shape because: my one says that 4 has more than it should and 5 has less than it should. However I still got to the top first.

Calculates the likelihood of a number occurring.

Use Graph 2 to answer the following.

5. a) Complete Table 2 below.

    b) Order the differences from most likely to least likely in Diagram 2.

Table 2: Likelihood of spinning each difference

Difference	Number of outcomes	Likelihood
0	6	$6/36$
1	10	$10/36$
2	8	$8/36$
3	6	$6/36$
4	4	$4/36$
5	2	$2/36$
Total	36	

Diagram 2: Order of likelihood

Difference	Likelihood
	most likely
1	
8	
3	
0	
4	
5	
	least likely

It's not fair!

During the group discussion (page 3), you talked about the question:

> Is the game "Take a spin" fair or unfair?

6. Explain why the game is not fair.
    Use the information you have collected to support your explanation.

    I think the game is unfair, because player A has an unfair advantage. This is that player A has more outcomes than player B.

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Work sample 3:
Maths investigation

Relevant parts of the achievement standard

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Summary of task

Students had spent time reviewing the following concepts:

- 12hr/24hr time/timetables
- Constructing bar/sector graphs
- Comparative bar graphs
- Surveying (conducting survey)

Students were going on a camp and were required to undertake the task below while they were on camp.

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Work sample 3:
Maths investigation

Student instructions:

1. You are to plan a timetable for a day at the school camp for your group at Elanda Point. You need to identify which activities are compulsory and how long they take. You also need to allow for eating and cleaning up time. You will need to consider the following in your timetable, which will be presented using the 24 hr clock.

    – Time of departure from school
    – Time of arrival at camp
    – Whole group meeting
    – Settling in time (dorms)
    – Compulsory activity (choose from list below)
    – Meal breaks including morning tea, lunch, afternoon tea, dinner and supper
    – Free time
    – Showers
    – Night time activity
    – Lights out.

   Compulsory Activities: High Ropes, Canoeing, Mountain Bike Riding, Orienteering. Each group completes one compulsory activity in Day 1.

2. Calculate the total time from the time you leave school until lights out.

3. Calculate the time taken for the following
    – Travelling in bus
    – Activities
    – Free Time including showers and settling in time
    – Eating and cleaning up
    – Other

4. Produce a timetable and present it in a table format using a Word Document or Excel Spread sheet

5. You will need to show the time allocations for each category in (3) in either a bar or pie graph. You may choose to draw this by hand or by using IT skills, eg Excel

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Work sample 3:
Maths investigation

Annotations

Time	Activity	Duration
8:30	Arrive at school	10 mins
8:40	Bus arrive, roll, put luggage in bus	20 mins
9:00	Leave school	30 mins
9:30	Arrive at Elanda point and get luggage off bus	30 mins
10:00	Meeting, showing us around	1 hour
11:00	Morning tea	10 mins
11:10	Settling in cabins and get ready for activities	20 mins
11:30	High ropes	1 hour
12:30	Lunch and clean up	40 mins
13:10	Walk	1 hour and 30 mins
14:40	Outside games with class	50 mins
15:30	Afternoon tea	20 mins
15:50	Canoeing	1 hour and 30 mins
17:20	Free time and shower	1 hour
18:20	Dinner and clean up	1 hour
19:20	Night time activities	2 hours
21:20	Supper	15 mins
21:35	Get ready for bed	15 mins
21:50	Talk	10 mins
22:00	Lights out	

Total: 14 hours and 30 min

Calculates time durations.

Uses 24 hour time.

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Work sample 3:
Maths investigation
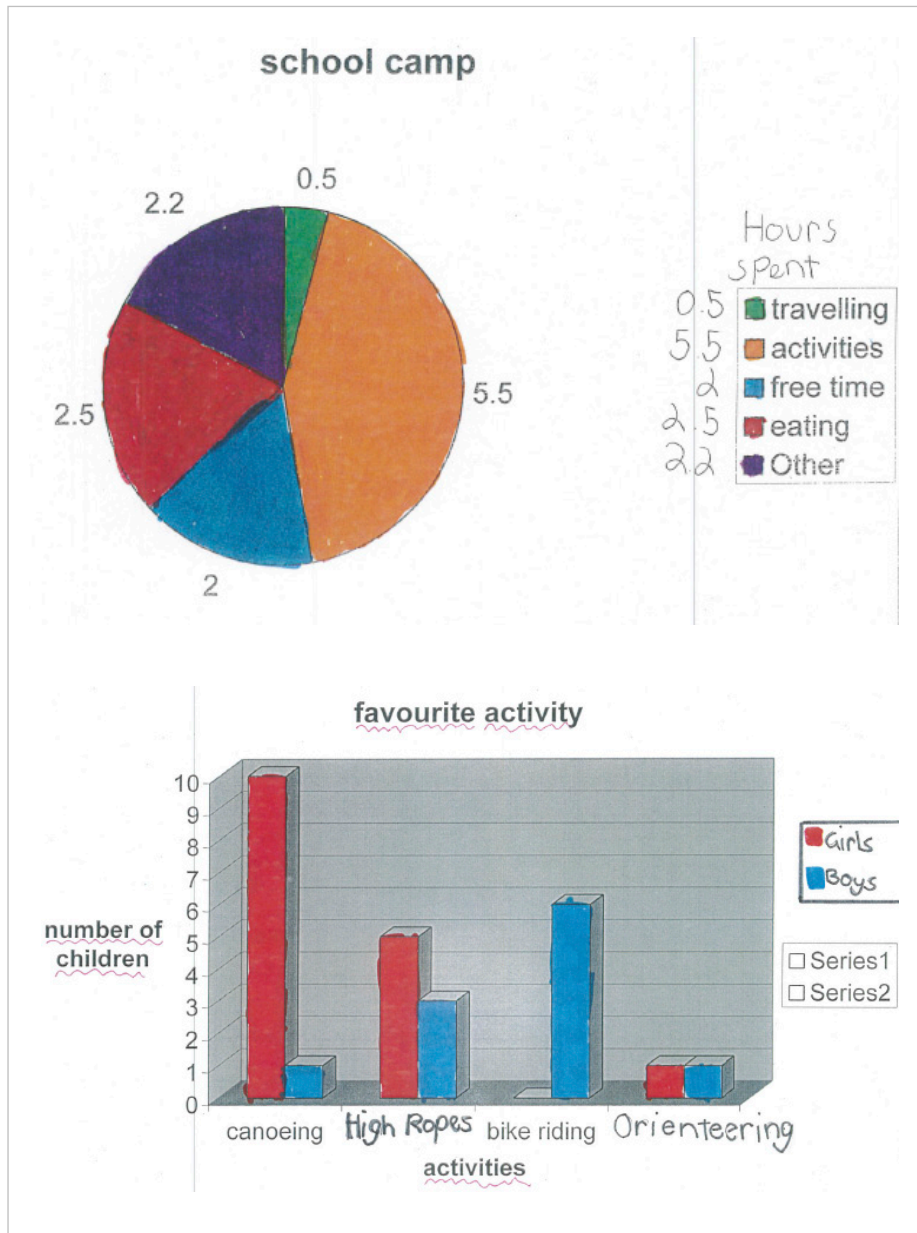
Annotations

Creates pie chart of hours spent on activities.

Creates a side by side column graph using categorical data from data collected.

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Work sample 3:
Maths investigation

Justification

- In my time table I put the food time how I normally have food at home and school so I had lunch around 12:00,[like at school and home]

- I thought about how we have to have showers every day so I made time for a shower which was in free time.

- With eating we clean our dishes.

- Bus time was included which was only 30 mins

- I plan the day how I did because it was easy and that's how I would think a day at school camp would be like.

- I new we had to include activities, lunch, free time, showers and bus time.

Annotations

Provides an explanation for the time allocated to various activities.

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Work sample 4:
Numbers – Mixed operations

Relevant parts of the achievement standard

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Summary of task

Students have calculated solutions to problems involving mixed operations.

Students practiced this activity and were then asked to show a real variety and sophistication of skills not just repeated standard number sentences.

The following instructions were given:

- Select 15 numbers between 1 and 100
- Express each of your numbers in different ways using mixed operations
  - For example, $2 = 2 \div 2 + 1$
  - For example, $2 = 4 \times 1 - 2$

Mathematics

Work sample 4:
Numbers – Mixed operations

Annotations

1. $30 = 5 \times 5 + 5, 14 \times 2 + 2$
2. $16 = 6 \times 3 - 2, 7 \times 2 + 2$
3. $90 = 40 \times 2 + 10, 40 \times 2 + 10$
4. $5 = 2 \times 2 + 1, 4 \times 1 + 1$
5. $50 = 30 \times 2 - 10, 26 \times 2 - 2$
6. $20 = 5 \times 5 - 5, 11 \times 2 - 2$
7. $22 = 10 \times 2 + 2, 9 \times 2 + 4$
8. $54 = 25 \times 2 + 4, 26 \times 2 + 2$
9. $46 = 100 \div 2 - 4, 25 \times 2 - 4$
10. $63 = 15 \times 4 + 3, 30 \times 2 + 3$
11. $45 = 80 \div 2 + 5, 23 \times 2 - 1$
12. $18 = 5 \times 3 + 3, 10 \times 2 - 2$
13. $71 = 35 \times 2 + 1, 9 \times 8 - 1$
14. $84 = 20 \times 4 + 4, 41 \times 2 + 2$
15. $100 = 20 \times 4 + 20, 25 \times 3 + 15$

Demonstrates an adequate level of competence in using the four operations to express numbers in different ways.

Understanding of the order of operations is evident. Most calculations are accurate.

Uses numbers up to 100.

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Work sample 5:
Measurement and geometry – Rectangular prisms

Relevant parts of the achievement standard

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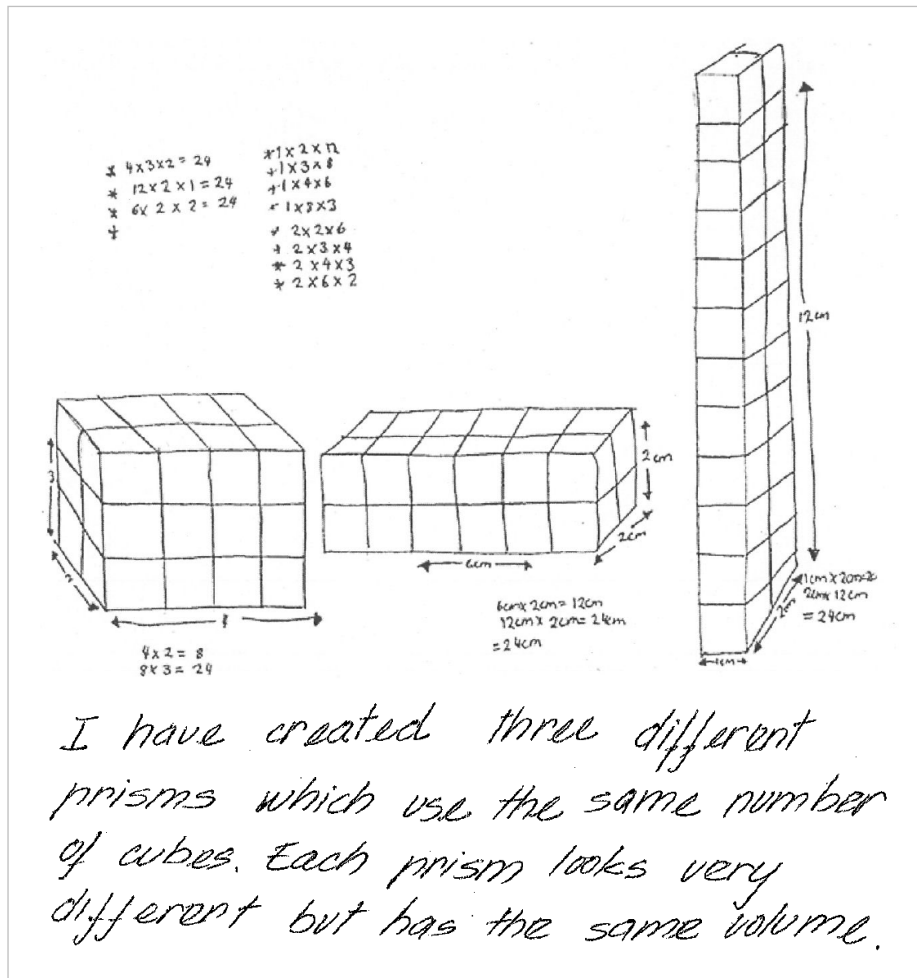
Summary of task

Students had previously covered the following concepts:

- Relationship of two-dimensional (area) with three dimensional (volume)
- Choosing appropriate units of measure – square cm for area, cubic cm for volume
- Constructing simple prisms
- Formula for volume right prism= L X B X H.

Students were required to construct rectangular prisms using 24 interlocking cubes, record and describe their findings. They made a rectangular prism with a volume of 24 cubic units. They described their rectangular prism in terms of its length, breadth and height and recorded this information using diagrams and words. Students made other rectangular prisms with a volume of 24 cubic units, recording the results and describing what they noticed.

Mathematics

Work sample 5:
Measurement and geometry – Rectangular prisms

Annotations

$4 \times 3 \times 2 = 24$
$12 \times 2 \times 1 = 24$
$6 \times 2 \times 2 = 24$

$1 \times 2 \times 12$
$1 \times 3 \times 8$
$1 \times 4 \times 6$
$1 \times 8 \times 3$

$2 \times 2 \times 6$
$2 \times 3 \times 4$
$2 \times 4 \times 3$
$2 \times 6 \times 2$

12cm

2cm

2cm

6cm

$4 \times 2 = 8$
$8 \times 3 = 24$

$6cm \times 2cm = 12cm$
$12cm \times 2cm = 24cm$
$= 24cm$

1cm $\times$ 20cm
20cm 12cm
2cm = 24cm

1cm

I have created three different prisms which use the same number of cubes. Each prism looks very different but has the same volume.

Establishes the calculations to develop the formulae for the volume of a rectangular prism. Accurately carries out calculations.

Mathematics

Work sample 6:
Financial mathematics – Designing meal options

Relevant parts of the achievement standard

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Summary of task

Students had been given opportunities to develop their ability to multiply decimals in the context of money. They have also investigated simple fraction and percentage discounts.

In this activity students prepared a quote for providing meal options for a catering company. They calculated costs and outlined various price options including special bulk buying.

Students were given information about discounts which were available for bulk purchases. The discounts were:

- 1/3 off vegetarian patties and sizzling sausages
- 25% off juicy steak.

All calculations were completed using mental or written methods.

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Work sample 6:
Financial mathematics – Designing meal options

Designing meal options

Meal option 1	Calculations
1) Vegetarian patties x 3	1) $1.50 x 3 = $4.50
2) Salad	2) 70c
3) Bread roll	3) 50c
4) Fruit juice x 2	4) $1.00 x 2 = $2.00
5) Fresh fruit platter	5) 30c + 50c = 80c

Meal option 2	Calculations
1) Juicy steak	1) $4.00
2) Rice	2) $1.00
3) Stir-fry vegetables	3) $1.50
4) Fresh fruit platter	4) 30c + 50c = 80c
5) Flavoured milk x 2	5) $1.00 + $1.00 = $2.00

Meal option 3	Calculations
1) Sizzling sausage x 3	1) $1.50 x 3 = $4.50
2) Potato wedges	2) $1.00
3) Bread roll	3) 50c
4) Ice-cream and pineapple	4) $1.50 + 30c = $1.80
5) Plain milk x 2	5) 50c x 2 = $1.00

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Work sample 6:
Financial mathematics – Designing meal options

Annotations

Accurately adds decimals and carries out calculations involving the four operations.

Calculating the costs

Meal Option 1

1. Vegetable patties x 3
2. Salad
3. Bread roll
4. Fruit juice x 2
5. Fresh fruit platter

1. $1.50 x
   3
   ———
   $4.50
2. $0.70
3. $0.50
4. $1.00 x
   2
   ———
   $2.00
5. $0.30 + $0.50 = $0.80

+$4.50
0.70
0.50
2.00
0.80
——
$8.50

Meal Option 2

1. Juicy steak
2. Rice
3. Stir-fry vegetables
4. Fresh fruit platter
5. Flavoured milk x 2

1. $4.00
2. $1.00
3. $1.50
4. $0.30 +
   $0.50
   ———
   $0.80
5. $1.00 x
   2
   ———
   $2.00

+$4.00
1.00
1.50
0.80
2.00
——
$8.30

Meal Option 3

1. Sizzling sausages x 3
2. Wedges
3. Bread roll
4. Ice cream and pineapple
5. Plain milk x 2

1. $1.50 x
   3
   ———
   4.50
2. $1.00
3. $0.50
4. $1.50 +
   0.30
   ———
   1.80
5. $0.50 x
   2
   ———
   $1.00

+$ 4.50
1.00
0.50
1.80
1.00
——
$ 8.80

Mathematics

Work sample 6:
Financial mathematics – Designing meal options

Writing the quote

Catering Capers.... YUM ☺

Brook Street, Mount Isa
Phone 5555 5543

Quote
26 March 2009

To: The Customer

Description	Unit Price	Quantity	Cost
Meal Option 1. Three vegetables patties, salad, bread roll, fresh fruit platter, two fresh fruit juices.	$8.50	x 4	$8.50 x 4 = $34.00
Meal Option 2 Juicy steak, stir-fry vegetables, rice, fresh fruit platter, two flavoured milks	$9.30	x 2	$9.30 x 2 = $18.60
Meal Option 3 Three gourmet sizzling sausages, wedges, bread roll, icecream with fresh pineapple, two plain milks	$8.80	x 4	$8.80 x 4 = $35.20

10% GST INCLUDED

SUBTOTAL	$87.80
DELIVERY	$2.00
TOTAL	$89.80
Refund from $100	−$100.00, 89.80, $10.20

Quote prepared by Olivia

To accept this quotation sign here _____
Thank You!

Annotations

Multiplies decimals by a single digit number.

Demonstrates they can add decimals.

Demonstrates they can subtract a decimal amount from 100.

Mathematics

Work sample 6:
Financial mathematics – Designing meal options

Annotations

Implies demonstration of a calculated fractional discount.

Implies demonstration of a 25% discount.

Demonstrates ability to subtract decimals.

Mathematics

Work sample 7:
Numbers and place value – Everyday integers

Relevant parts of the achievement standard

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media.

Students locate fractions and integers on a number line. They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students list and communicate probabilities using simple fractions, decimals and percentages.

Summary of task

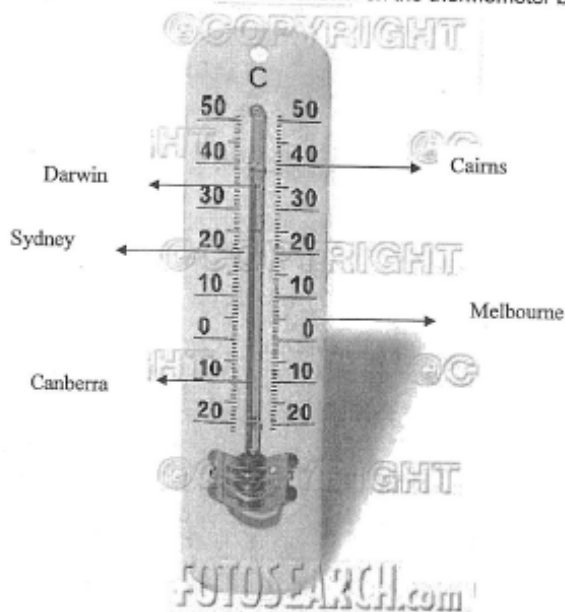Students have investigated the use of positive and negative integers in authentic situations.

Students completed the task to solve problems in everyday contexts using integers.

Mathematics

Work sample 7:
Numbers and place value – Everyday integers

1. The temperatures at five cities are shown on the thermometer below:

Using the thermometer above write the temperatures of each city here.

Darwin _35_ °C   Cairns _40_°C   Canberra _-10_ °C

Sydney _20_ °C   Melbourne _5_ °C

Which is the warmest city? cairns	What is the lowest temperature which can be measured on this thermometer? ~22°C
How much warmer is Melbourne than Canberra? 15°C	What is the difference in temperature between Melbourne and Darwin? 30°C

Annotations

Reads positive and negative integers from a number line.

Solves problems involving positive and negative integers.

Mathematics

Work sample 8:
Plotting points on the Cartesian plane

Relevant parts of the achievement standard

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media.

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Summary of task

Students have been building their understanding of grid references.

Students designed and plotted coordinates on all four quadrants of the Cartesian plane. They worked in pairs. The first student drew a pattern on grid paper and described their diagram to their partner using coordinates on the Cartesian plane. The second student was required to reproduce the first student's patterns using the information provided.

Mathematics

Work sample 8:
Plotting points on the Cartesian plane
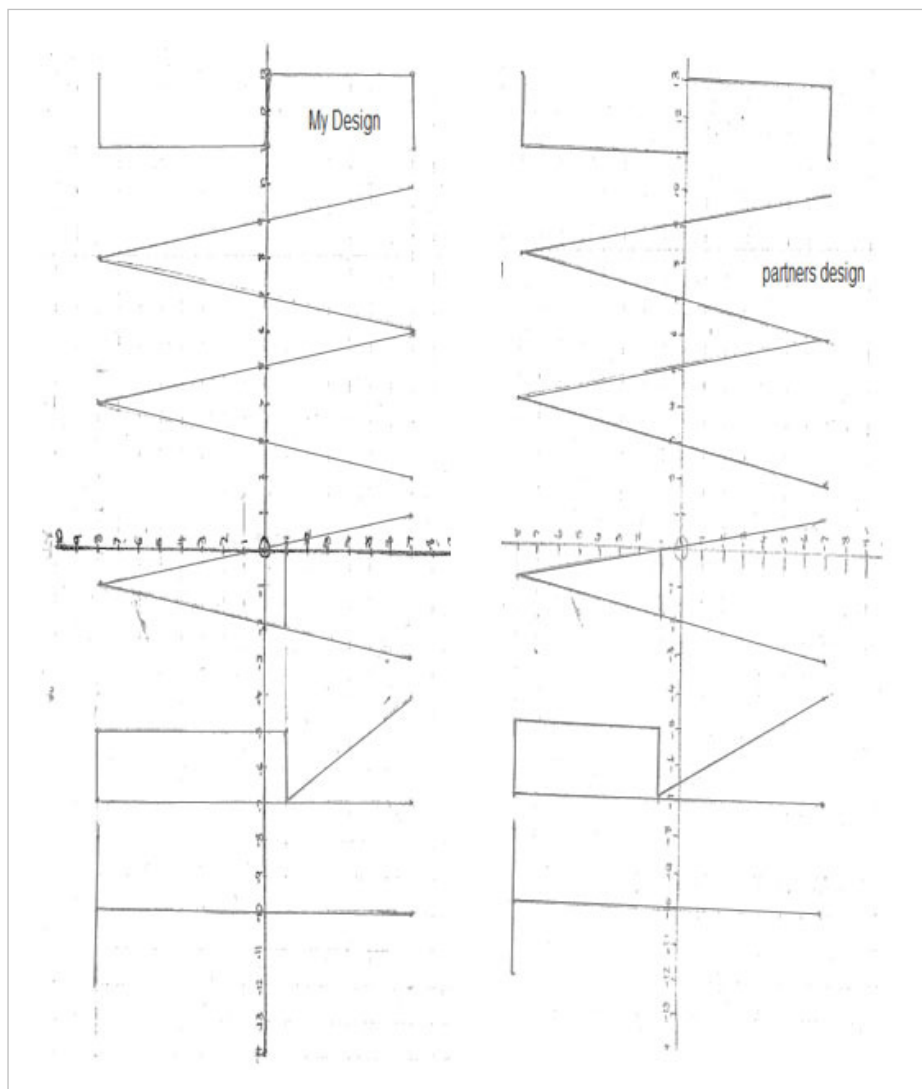
Annotations

Accurately reproduces the partner's pattern by locating most coordinates in all four quadrants.

Mathematics

Work sample 9:
Map of the run course

Relevant parts of the achievement standard

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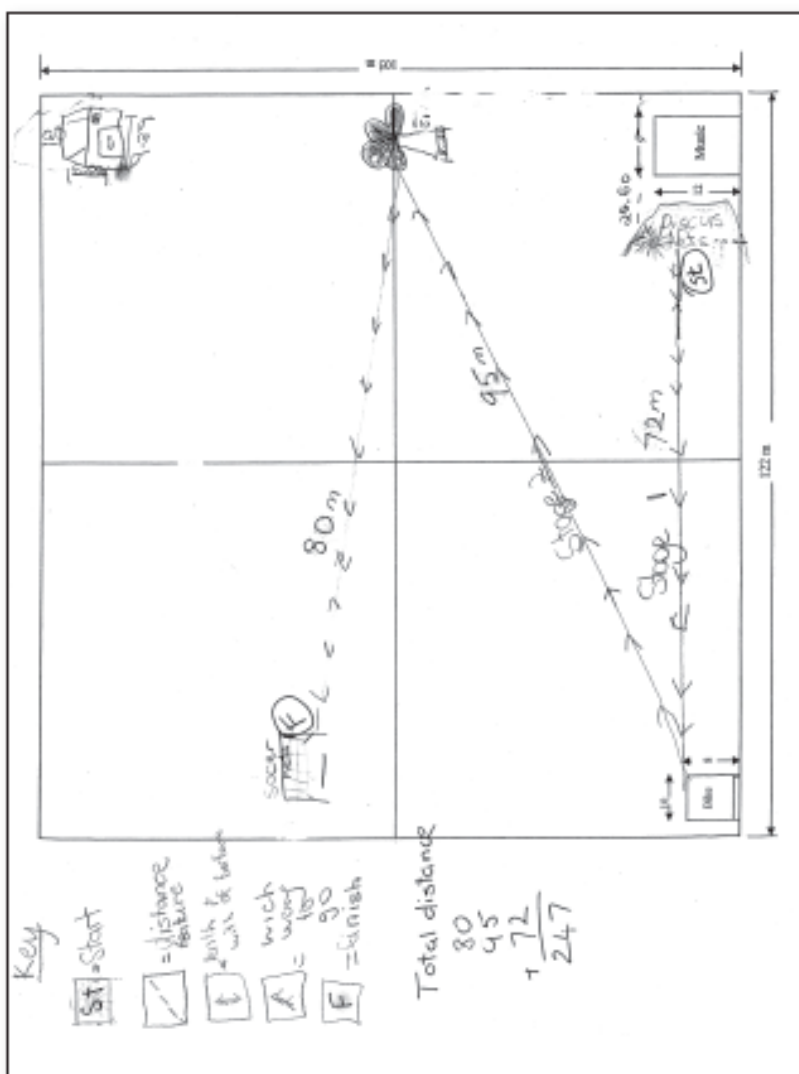
Summary of task

In pairs, students planned the course of a fun run within school grounds. Students measured using tapes and trundle wheels. Students were provided with a map of the school and discussed the scale they used to draw the diagram of their course.

Students calculated the total length of their course.

Mathematics

Work sample 9:
Map of the run course

Annotations

Uses appropriate scaled instruments to measure length.

Mathematics

Work sample 10:
Fractions investigation

Relevant parts of the achievement standard

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media.

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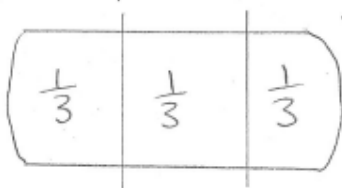
Summary of task

Students have completed work on equivalent fractions and performed simple calculations using fractions.

Students were required to complete a task in class requiring them to demonstrate their understanding of equivalent fractions.

Mathematics

Work sample 10:
Fractions investigation

1. How do 3 people have an equal share of a cake?

   $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$

2. Imagine there are 3 cakes and each one is cut into 8 equal pieces. The cake will be shared between Darren, Susan and Jo. Darren and Susan eat 13 slices of cake between them. Write this number of slices as a fraction of one whole cake.

   $13/24$

3. What fraction is left after Darren and Susan eat their share?

   $11/24$

4. Jo eats 8 slices of the cake. Write the number that represents her share of the cake in two different ways.

   $\frac{8}{24} = \frac{1}{3}$

5. How many slices (in fractions) does Jo, Susan and Darren eat?

   $\frac{7}{8}$

6. Rewrite the fractions in samples and forms and list those that are equivalent.

   equivalent

   $\frac{1}{3}$ $\frac{5}{10}$ $\frac{12}{15}$ $\frac{6}{18}$ $\frac{7}{25}$ $\frac{30}{45}$

   $\frac{16}{48}$ $\frac{18}{54}$ $\frac{20}{60}$ $\frac{52}{126}$

   $\frac{1}{3}$ $\frac{1}{2}$ $\frac{4}{5}$ $\frac{1}{3}$ $\frac{7}{25}$ $\frac{6}{9}$

   $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ $\frac{26}{63}$
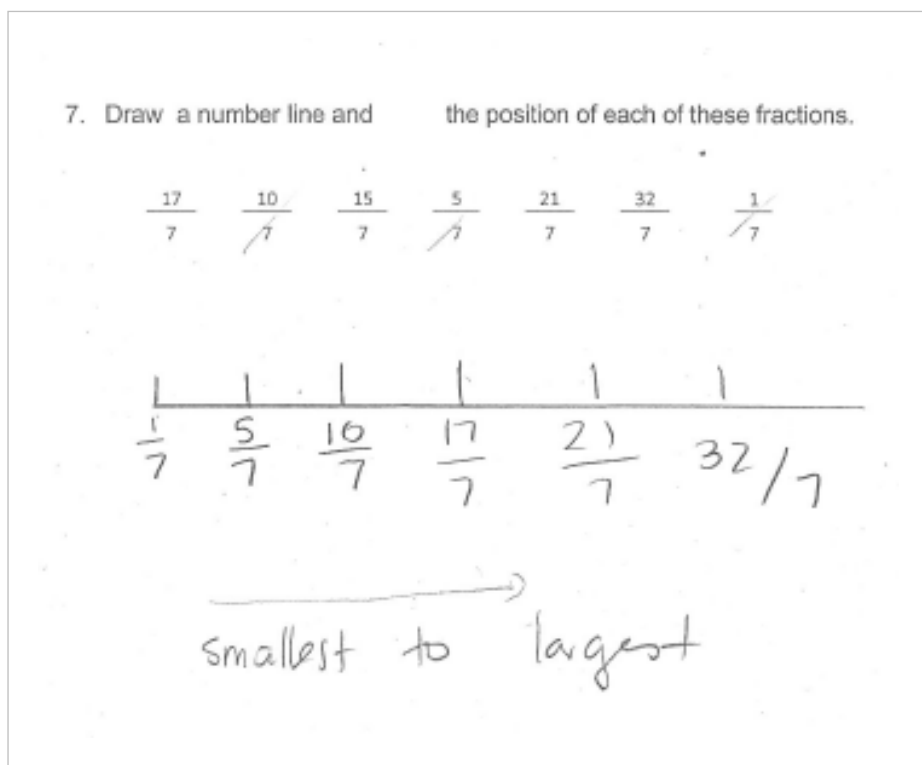
Annotations

Demonstrates an understanding of unit fractions.

Calculates differences to make 1 whole.

Displays an understanding of equivalent fractions.

Mathematics

Work sample 10:
Fractions investigation

7. Draw a number line and   the position of each of these fractions.

$$\frac{17}{7} \quad \frac{10}{7} \quad \frac{15}{7} \quad \frac{5}{7} \quad \frac{21}{7} \quad \frac{32}{7} \quad \frac{1}{7}$$

$$\frac{1}{7} \quad \frac{5}{7} \quad \frac{10}{7} \quad \frac{17}{7} \quad \frac{21}{7} \quad 32/7$$

smallest to largest

Annotations

Orders fractions on a number line.