Mathematics

Year 7
Satisfactory

WORK SAMPLE PORTFOLIO

The 2012 portfolios are a resource to support teachers in planning and implementation of the Foundation to Year 10 Australian Curriculum in the learning area. Each portfolio comprises a collection of student work illustrating evidence of student learning in relation to the achievement standard. At every year level there are three portfolios illustrating satisfactory, above satisfactory and below satisfactory achievement in relation to the standard.

Each portfolio comprises a collection of different student work selected by state and territory nominees, and annotated and reviewed by classroom teachers and other curriculum experts. Each work sample in the portfolio varies in terms of how much time was available to complete the task and/or the degree of scaffolding provided by the teacher.

There is no pre-determined number of student work samples in a portfolio nor are they sequenced in any particular order. Together as a portfolio, the samples provide evidence of all aspects of the achievement standard unless otherwise specified.

As the Australian Curriculum is progressively implemented in schools, the portfolios will continue to be reviewed and enhanced in relation to their comprehensiveness in coverage of the achievement standard and their representation of the diversity of student work that can be used to highlight evidence of student learning.

THIS PORTFOLIO – Year 7 Mathematics

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

Sample 1	Number and algebra – Algebra and the Cartesian Plane
Sample 2	Number – Integers
Sample 3	Statistics – Statistics and probability
Sample 4	Number and measurement – Eggs for sale
Sample 5	Geometry – Build the structure
Sample 6	Statistics and probability – Seatbelt sampling
Sample 7	Measurement – Measurement investigation

In this portfolio, the student represents numbers using variables, connects the laws and properties for numbers to algebra. They interpret simple linear representations and model authentic information (WS 1). The student solves simple linear equations and evaluates algebraic expressions after numerical substitution. They assign ordered pairs to given points on the Cartesian plane and use formulas for the area and perimeter of rectangles and volume of rectangular prisms (WS1, WS 4 and WS 7)).The student solves problems involving the comparison, addition and subtraction of integers (WS 2). They describe the relationship between the median and mean in data displays (WS 3). The student determines the sample space for simple experiments with equally likely outcomes and assigns probabilities to those outcomes. They calculate mean, mode, median and range for data sets and construct stem-and-leaf plots and dot-plots (WS 3). The student compares the cost of items to make financial decisions (WS 4). They describe different views of three-dimensional objects (WS 5). They solve problems involving percentages and all four operations with fractions and decimals and express one quantity as a fraction or percentage of another (WS 6).

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The annotated samples in this portfolio provide evidence of most (but not necessarily all) aspects of the achievement standard. The following aspects of the achievement standard are not evident in this portfolio:

- *make connections between whole numbers and index notation and the relationship between perfect squares and square roots*
- *represent transformations on the Cartesian plane*
- *solve simple numerical problems involving angles formed by a transversal crossing two parallel lines*
- *identify issues involving the collection of continuous data*
- *classify triangles and quadrilaterals.*

Number and algebra – Algebra and the Cartesian Plane

Relevant parts of the achievement standard

By the end of Year 7, students solve problems involving the comparison, addition and subtraction of integers. They make the connections between whole numbers and index notation and the relationship between perfect squares and square roots. They solve problems involving percentages and all four operations with fractions and decimals. They compare the cost of items to make financial decisions. Students represent numbers using variables. They connect the laws and properties for numbers to algebra. They interpret simple linear representations and model authentic information. Students describe different views of three-dimensional objects. They represent transformations in the Cartesian plane. They solve simple numerical problems involving angles formed by a transversal crossing two parallel lines. Students identify issues involving the collection of continuous data. They describe the relationship between the median and mean in data displays.

Students use fractions, decimals and percentages, and their equivalences. They express one quantity as a fraction or percentage of another. Students solve simple linear equations and evaluate algebraic expressions after numerical substitution. They assign ordered pairs to given points on the Cartesian plane. Students use formulas for the area and perimeter of rectangles and calculate volumes of rectangular prisms. Students classify triangles and quadrilaterals. They name the types of angles formed by a transversal crossing parallel line. Students determine the sample space for simple experiments with equally likely outcomes and assign probabilities to those outcomes. They calculate mean, mode, median and range for data sets. They construct stem-and-leaf plots and dot-plots.

Summary of task

Students had completed units of work on Algebra and the Cartesian plane. The task consisted of a series of written questions on the topic and students were asked to complete the task under test conditions in a lesson.

Number and algebra – Algebra and the Cartesian Plane

Algebra and the Cartesian Plane

Part A: Algebra

1. Write using symbols:

a. The total of x and y

x=
y=

b. The multiple of 6 and p

6xP=

c. t decreased by 2

t-2=

d. The product of y and 5, less x.

yx5 ≤ x-2

2. If c= 2 and b= 5, evaluate:

a. b – c

3

b. 6bc

6+b+c=13

c. (b + c) ÷ 7

1

3. In the expression 3x + 5, which is the

a. variable?

x

b. operation?

+

c. factor with the pronumeral?

3

4. Simplify the following expressions.

a. 2x + 3x

5x

b. 2a + b + 4a

6a+b

c. 5x – 3x + x

1x

d. 2 x 4y

8y

e. 4a ÷ 2

2a

f. 2x + x² + 3x

6x

Annotations

Uses algebraic terms in expressions.

Substitutes variables for values to solve simple algebraic equations.

Identifies the terms and operator in expressions.

Simplifies simple expressions.

Acknowledgement
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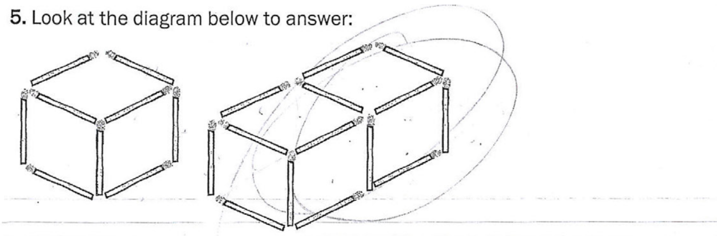
Number and algebra – Algebra and the Cartesian Plane

5. Look at the diagram below to answer:



a.

Draw up a table showing number of shapes and number of matches used.

Shapes	1	2	3	4	5	6	7	8
matches	4	8	12	16	20	24	28	32

b.

Select pronumerals to stand for the two variables and express the rule in algebraic form.

x	1	2	3	4	5
y	4	8	12	16	20

c.

Calculate from the rule the number of matches needed to form 15 shapes.

15 = 60

d.

Find by substitution in the rule how many shapes can be formed from 49 matches.

12 and 1 left over.

PART B: The Cartesian Plane

1. Graph the set of numbers onto the number line given

{2, -1, -4, 0}

-4 -1 2

0

2. Penny checks her bank account balance and it reads $ - 240.00 .

a. What does this mean for Penny? She has lost money.

b. If she deposits $40, what is her new balance? - 200.00

Annotations

Uses a table to represent the value of variables.

Locates integers on a blank number line.

Solves problems using negative integers.

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Number and algebra – Algebra and the Cartesian Plane

3. Add these directed numbers

a. -15 + 7 = -8

b. -54 + 20 = -34

c. 6 + -3 = 3

d. -12 + -5 = 17

4. Subtract these directed numbers

a. 0 – 9 = 9

b. 8 – 20 = 12

c. -3 – 5 = 2

d. -32 – (-8) = -40

5. Evaluate

a. (-3) × 8 = -24

b. (-7) × (-4) = 28

c. $(-8)^2$ = 64

d. 25 ÷ (-5) = -5

e. (-16) ÷ (-8) = 2

6. Using the number plane below, write the coordinates for the following letters:

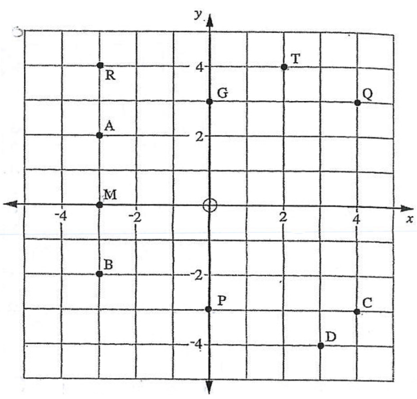
a. T 2, 4

b. A -3, 2

c. C 4, -3

d. P 0, 3

e. M -3, 0



Annotations

Calculates the addition of positive and negative integers.

Calculates the subtraction of positive and negative integers with few errors.

Calculates multiplication and division of positive and negative integers.

Identifies coordinates from a Cartesian plane.

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Number and algebra – Algebra and the Cartesian Plane

7. On the number plane below plot the following coordinates in each set. Join them in order and name the shape.

a. (7, 2) (7, 5) (4, 5) (4, 2)

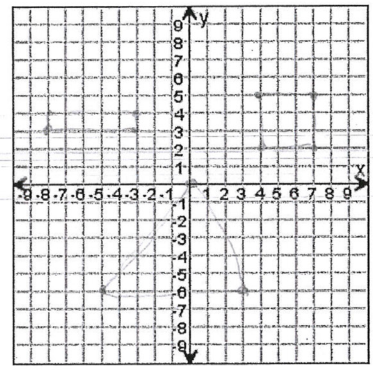
Shape: Square

b. (0, 0) (-5, -6) (3, -6)

Shape: Triangle

c. (-8, 3) (-3, 3) (-3, 4) (-8, 4)

Shape: Rectangle

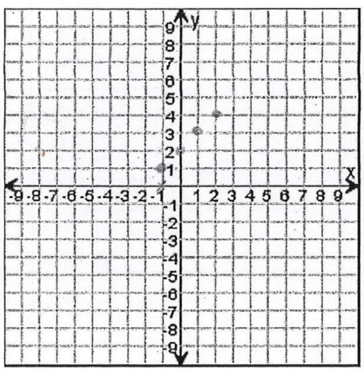


8. a. Complete the table of values using the rule given

$y = x + 2$

x	-1	0	1	2
y	1	2	3	4

b. Plot these coordinates on the grid below to graph the straight line



Annotations

Identifies the shape given by plotting coordinates on a Cartesian plane.

Plots coordinates on a Cartesian plane.

Uses an algebraic rule to complete a table of values.

Plots a straight line on a Cartesian plane from an equation of a straight line.

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Number – Integers

Relevant parts of the achievement standard

By the end of Year 7, students solve problems involving the comparison, addition and subtraction of integers. They make the connections between whole numbers and index notation and the relationship between perfect squares and square roots. They solve problems involving percentages and all four operations with fractions and decimals. They compare the cost of items to make financial decisions. Students represent numbers using variables. They connect the laws and properties for numbers to algebra. They interpret simple linear representations and model authentic information. Students describe different views of three-dimensional objects. They represent transformations in the Cartesian plane. They solve simple numerical problems involving angles formed by a transversal crossing two parallel lines. Students identify issues involving the collection of continuous data. They describe the relationship between the median and mean in data displays.

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Summary of task

Students were asked to complete a quiz in class after completing a revision of integers and their application in authentic situations.

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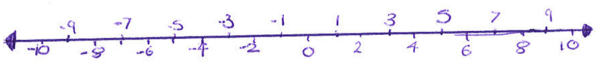
Number – Integers

Integers

Integers are all of the positive and negative whole numbers including zero.

A number line is very useful when working with integers.

1. Draw a number line from -10 to +10



As you move right along the number line, the numbers ascend or get larger.

2. Arrange the following integers in ascending order:

   a. 8, -3, 6, 0, 2, -4, -7
   -7, -4, -3, 0, 2, 6, 8

   b. 34, 23, -6, 4, -65, 3, -63
   -65, -63, -6, 3, 4, 23, 34

3. Samantha was keeping score for a card game she and her friends were playing. The scores are listed below. Rank each player according to their score from lowest score to highest score.

   Jack -100, Josh 200, Casey -500, Claire –50, Chris 1500, Blake 1600 and Lara -10

   -500, -100, -50, -10, 200, 1500, 1600

4. Write '>' or '<' to make the following statements correct.

   a. -32 __>__ -35
   b. 0 __>__ -4
   c. -7 __>__ -10
   d. 12 __>__ -29

Adding and Subtracting Integers

ADDITION

-2 + (-3) = **-5**

2 negatives plus 3 negatives equals 5 negatives.

5. The above example shows you the result of -2 + (-3). What addition rule do you learn from the above example? ~~the~~ You plus -2 and -3 together and because it is ~~ta~~ negative 3 you turn the plus to a take away and you get -5.

Annotations

Constructs a number line with positive and negative integers.

Orders integers from lowest to highest.

Compares integers using mathematical symbols.

Demonstrates understanding of the effect of adding two negative integers together.

Acknowledgement
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Number – Integers

6. Calculate the following using a number line.

a. -7 + 5 = -2
b. 4 + (-8) = -4
c. -24 + 34 = 10
d. -8 + 8 = 0
e. 11 + (-6) = 5
f. -7 + (-10) = -17
g. 5 + (-5) = 0
h. -6 + 7 + (- 4) = -3

SUBTRACTION

When you subtract integers, think of the problem as 'take – away'.

-4 – (-2) = **-2**

4 negatives take away 2 negatives equals 2 negatives.

-	-	-	-		- (take – away)		-	-		=		-	-

7. The above example shows you the result of -4 – (-2). What subtraction rule do you learn from the above example? 2 -s turn in to a plose. thats how it is ~~#~~ -2.

8. Calculate the following using a number line.

a. 6 – (-5) = 11
b. 18 – (-10) = 28
c. -3 – (-3) = 0
d. -2 – (-13) = 11
e. 6 – (-3) – 7 = 2
f. 13 – 20 – (-5) = -2

9. Complete the magic square.

-4	0	1
4	-1	-6
-3	-2	2

10. The temperature in Canberra at midday was 12°C. By midnight it had dropped to -5°C. By how much did the temperature drop?

17°C

Annotations

Calculates addition number sentences with positive and negative integers.

Demonstrates understanding of the effect of subtracting a negative integer.

Calculates subtraction number sentences involving positive and negative integers.

Solves problems involving the addition of integers.

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Number – Integers

11. What is the combined effect of a gain in weight of 5 kg and then a loss of 12 kg?

18kg

12. What will be the net result if Tara deposits $400 in her account followed by a withdrawal of $700?

$200

Integers and Golf

In golf, **par** is the pre-determined number of strokes that a golfer requires to complete a hole. Your score is 0 if you get the ball in the hole using par number of strokes. If your number of shots for the hole is less than par then your score is negative. If your number of shots for the hole is greater than par then your score is positive. Play 5 holes golf with your friend and complete the table below to determine who won.

Instructions:

Throw a set of three dice until you roll a double. **The double represents the hole** and each throw is counted as a stroke you take to get the ball in that hole.
Example: Strike one : 2, 5, 3. Strike two : 3, 1, 6. Strike three : 4, 5, 4. It has taken this player a total of 3 strokes to get the ball in the hole. Record this in the shots column and then allow your opponent to do the same. Repeat the above procedure for the rest of the holes. After the 5th hole, get the total of the **par score** column to find out who won.

13.

		Name: Beth		Name: Talitha	
HOLE	PAR	SHOTS	PAR SCORE	SHOTS	PAR SCORE
1	3	2	-1	2	-1
2	4	2	-2	2	-2
3	3	2	-1	1	-2
4	5	2	-3	1	-4
5	2	3	+1	4	+2
TOTAL	17	11	-6	10	-8

What is the difference between the TOTAL of PAR and your Total number of SHOTS?

Check if this answer is the same as the total of PAR SCORE.

They are ether between the par and 0 or above. Some times if your luckey you will get the same as par.

Annotations

Solves a problem involving subtraction of integers.

Calculates the addition of multiple integers.

Acknowledgement
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Statistics – Statistics and probability

Relevant parts of the achievement standard

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Summary of task

Students had completed a unit of work on statistics and probability. They completed an experimental investigation in class, recorded and graphed results and responded to questions formulated as a short test.

Statistics – Statistics and probability

Statistics and Probability Assessment Task Year 7

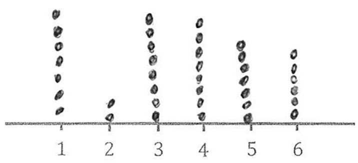
Part A

1. If you were to roll a standard six-sided die 36 times, how many sixes (6's) would you expect to get?

2. Experiment: Roll a standard six-sided die 36 times and record your results in the table below.

Number	Tally	Total
1	~~||||~~ ||	7
2	||	2
3	~~||||~~ |||	8
4	~~||||~~ |||	8
5	~~||||~~ ||	7
6	~~||||~~ |	6

3. Graph a dot-plot of your data on the line below.



4. What is the mode of this data?

3 and 4

5. Were the results what you expected? Explain your reasoning. Statisticaly, no! But I knew that the results wouldn't be theroyetically correct

Annotations

Constructs a dot-plot from data gathered.

Identifies mode from data set.

Compares calculated probability and observed results in a simple experiment.

Acknowledgement
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Statistics – Statistics and probability

6. Based on the results of your experiment, calculate the experimental probability (as a fraction) of rolling a:

1 - P(1)= $\frac{7}{36}$

2 - P(2)= $\frac{2}{36}$

3 - P(3)= $\frac{8}{36}$

4 - P(4)= $\frac{8}{36}$

5 - P(5)= $\frac{7}{36}$

6 - P(6)= $\frac{6}{36}$

Part B

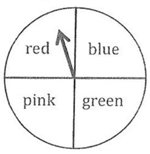
A single coin is tossed.

The sample space is: {Head, Tail}

The probability of tossing a Head is $P(H) = \frac{1}{2}$

The probability of tossing a Tail is $P(T) = \frac{1}{2}$

For the spinner shown:



1. List the sample space

2. What is the probability of spinning red?

$\frac{1}{4}$

3. What is the probability of spinning red or blue?

$\frac{1}{2}$

4. How could you change the spinner to increase the chance of spinning red? Explain your reasoning. Make red a bigger space so the probability of spinning red increses.

Annotations

Calculates the experimental probability for outcomes.

Identifies probability in experiments with equally likely outcomes.

Demonstrates understanding of increasing the probability of an outcome.

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Statistics – Statistics and probability

Part C

A Year 7 Maths class sat a test and the following results were recorded:

42, 36, 23, 40, 18, 29, 26, 25, 38, 33, 35, 35, 27, 29, 31, 15, 48, 29, 9

48,42,40,38,36,35,35,33,31,29,29,29,27,26,25,23,18,15,9

1. Complete the stem-and-leaf plot below using the above information.

Stem	Leaf
0	9
1	5
2	35567999
3	163855
4	280

2. What is the range of the results?
   39

3. What is the mode of the results?
   29

4. What is the median of the results?
   29

5. What is the mean of the results?
   30

6. Which measure (mode, median or mean) best represents the results of the class ? Explain your reasoning. The mean best represents the results of the class because it shows the average score for the class.

Annotations

Constructs a stem-and-leaf plot.

Calculates the mode, median and range of a data set.

Calculates mean and rounds to the nearest whole number.

Demonstrates understanding of mean and how it could be used to interpret data.

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Number and measurement – Eggs for sale

Relevant parts of the achievement standard

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Summary of task

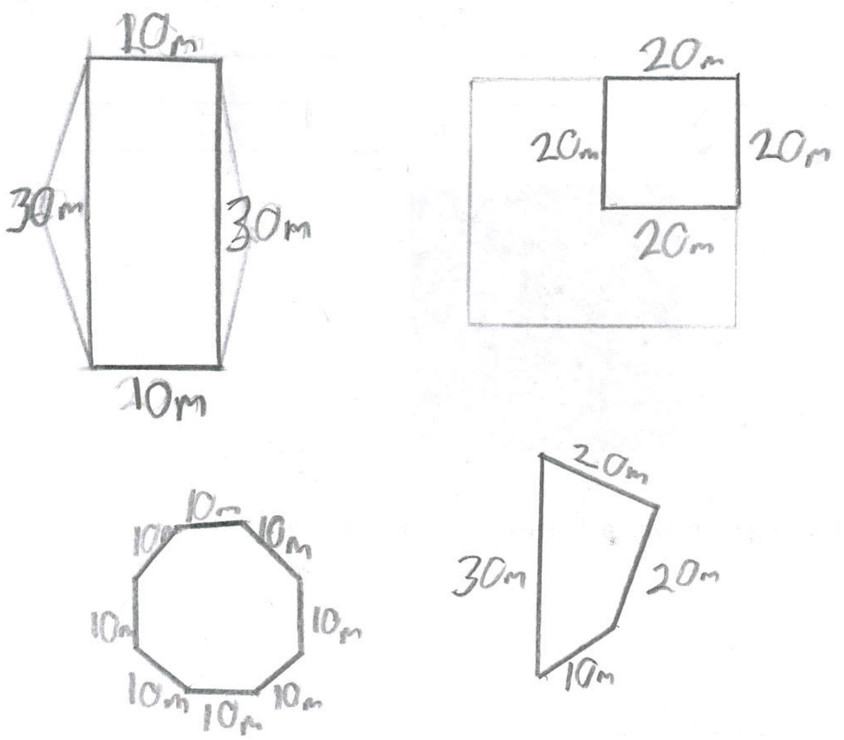
Students had completed units of work on perimeter and area and problem solving. They were given the task “Eggs 4 Sale – Eggonomical” to complete in class under timed conditions.

Number and measurement – Eggs for sale

EGGS 4 SALE - "Eggonomical"

PART A

Draw 4 different polygons with a total perimeter of 80 metres



Annotations

Calculates possible dimensions of polygons with a given perimeter.

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Number and measurement – Eggs for sale

Q3. If each chicken lays (on average) one egg per day, how many eggs will the chickens produce all together each month ? (assume 30 days per month)

480 eggs

Q4. The local supermarket 'Gillies' sells free-range eggs for the advertised price, as shown.

'Gillies' Eggs
Carton of 18 - $8.40

How much should the Frys sell their eggs per dozen to provide a better deal than the local supermarket, but still maximise their profit?

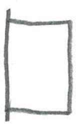
$0.4\dot{6}$
= 0.47¢ per egg
46¢ = $5.52
45¢ = $5.40
42¢ = $5.00

PART C

To create an even larger enclosure, Kristina talked Jose into using an existing 32m wall at the back of their property as part of the chicken enclosure. They still have the 80 metre length of fencing wire to use.

Using your previous investigations, or otherwise, calculate the largest area that could **now** be constructed for the chickens.

26 + 26 + 28



Annotations

Calculates the cost of an individual item from a carton.

Rounds calculation to provide an appropriate dollar value.

Identifies cost per item.

Compares cost of items to make suggestions on selling price of product.

Calculates cost of carton based on individual item costs.

Identifies possible lengths that total a given length.

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Geometry – Build the structure

Relevant parts of the achievement standard

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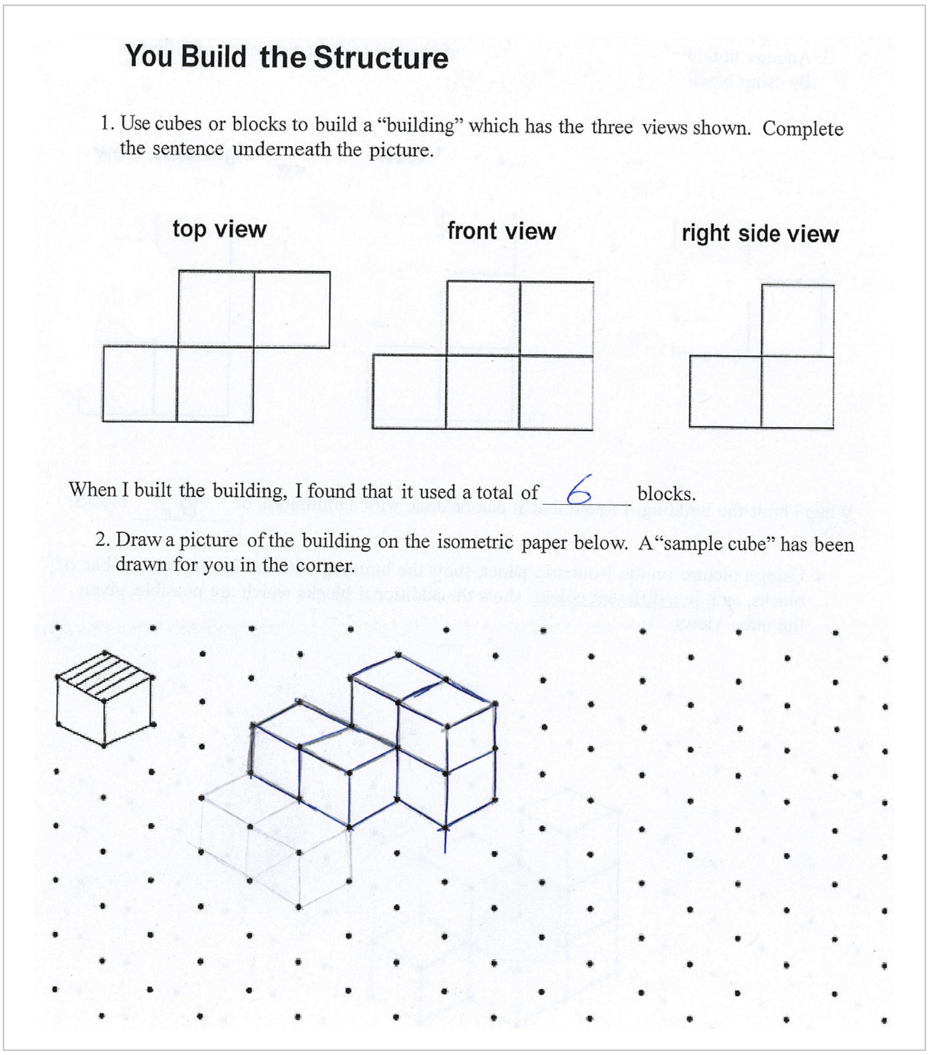
Summary of task

Students were asked to complete an investigation involving building and sketching prisms. They were required to use the different views of a ‘building’ and draw its three dimensional shape using isometric paper.

Geometry – Build the structure



You Build the Structure

1. Use cubes or blocks to build a "building" which has the three views shown. Complete the sentence underneath the picture.

top view

front view

right side view

When I built the building, I found that it used a total of 6 blocks.

2. Draw a picture of the building on the isometric paper below. A "sample cube" has been drawn for you in the corner.

Annotations

Identifies the number of prisms to construct a three-dimensional object from different view points.

Draws a three-dimensional object constructed by multiple prisms on isometric paper.

Acknowledgement
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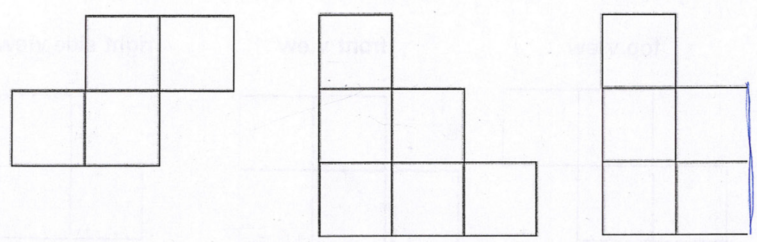
Geometry – Build the structure

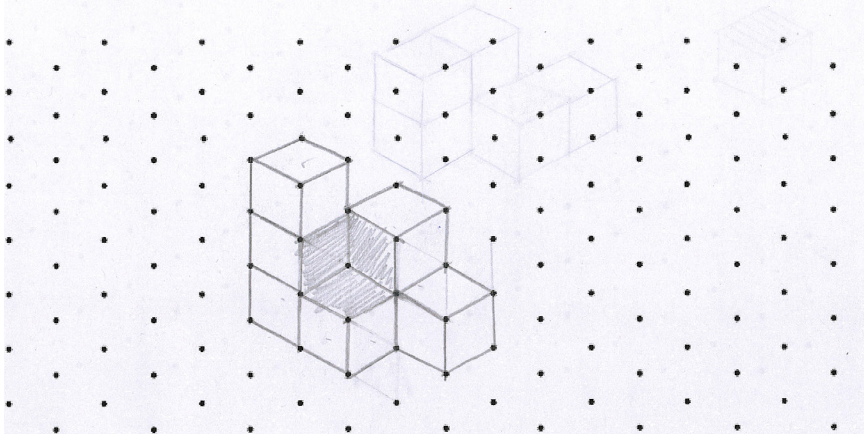
3. Another building, which has the views below, can be built in a number of different ways. By using blocks or cubes, write down the minimum number of blocks needed to build it.

top view **front view** **right side view**



When I built the building, I found that it can be done with a minimum of ~~8~~ 7 blocks.

4. Using a picture on the isometric paper, show the building with the minimum number of blocks, and, in a different colour, show the additional blocks which are possible, given the three views.



Annotations

Uses different views of a three-dimensional object to draw possible arrangements of prisms.

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Statistics and probability – Seatbelt sampling

Relevant parts of the achievement standard

By the end of Year 7, students solve problems involving the comparison, addition and subtraction of integers. They make the connections between whole numbers and index notation and the relationship between perfect squares and square roots. They solve problems involving percentages and all four operations with fractions and decimals. They compare the cost of items to make financial decisions. Students represent numbers using variables. They connect the laws and properties for numbers to algebra. They interpret simple linear representations and model authentic information. Students describe different views of three-dimensional objects. They represent transformations in the Cartesian plane. They solve simple numerical problems involving angles formed by a transversal crossing two parallel lines. Students identify issues involving the collection of continuous data. They describe the relationship between the median and mean in data displays.

Students use fractions, decimals and percentages, and their equivalences. They express one quantity as a fraction or percentage of another. Students solve simple linear equations and evaluate algebraic expressions after numerical substitution. They assign ordered pairs to given points on the Cartesian plane. Students use formulas for the area and perimeter of rectangles and calculate volumes of rectangular prisms. Students classify triangles and quadrilaterals. They name the types of angles formed by a transversal crossing parallel line. Students determine the sample space for simple experiments with equally likely outcomes and assign probabilities to those outcomes. They calculate mean, mode, median and range for data sets. They construct stem-and-leaf plots and dot-plots.

Summary of task

Students were asked to use information about seat belt use in Greenville to calculate the smallest number of cars in two months where its passengers wore seatbelts. They were required to explain their reasoning.

Statistics and probability – Seatbelt sampling

Seat Belt Sampling

This photograph was taken in Greenville (North Carolina), where the law states that everyone in a car must wear a seat belt. As part of a "Click-it or Ticket" campaign, each month, a certain number of cars is sampled to see if all the passengers are wearing seat belts.

1. Assuming that numbers have been rounded off to the nearest per cent, what is the smallest number of cars that could have been sampled to get the record seat belt use of 93%? Please explain, making all notes here as you explore possibilities.

93.5%

$28 \div 30 \times 100 = 93.33\%$ We got this answer by typing in possibillitys and eventually we got this number. (Trial & Error)

2. Similarly, what is the smallest number of cars that could have been sampled to get the previous month's seat belt use of 88%?

$26.5 \div 30 \times 100 = 88.33\%$ rounded to 88%

Annotations

Records the equation to calculate a percentage.

Describes problem solving method used to calculate answer.

Rounds decimals to the nearest whole number.

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Measurement – Measurement investigation

Relevant parts of the achievement standard

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Summary of task

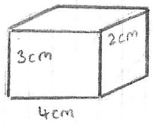
Students were asked to complete the following task as a culminating activity on a unit of work.

1. Calculate the volume and surface area of this rectangular prism made from cubes with lengths of 1 cm.

2. This set of cubes is arranged to from a different rectangular prism.
   a. What do you know about the volume of the new prism?
   b. Use isometric dot paper to draw examples of what the new prism may look like.
   c. For at least 2 of your examples, calculate the area of each face of the prism and add these to find the total surface area.
   d. Explain how you would construct the rectangular prism using the 24 cubes, so that it had the largest possible surface area.
   e. Collate your calculations in a table to demonstrate your answer.
   f. Provide a written explanation of your reasoning.
   g. Write a conclusion about what you discovered and how you discovered it.

Measurement – Measurement investigation

1.



$V = Lwh$
$V = 3 \times 4 \times 2$
$V = 24cm^2$

A (front) = Lw
= 4 × 3
= 12cm → × 2 = 24cm²
+
A (ends) = Lw
= 2 × 3
= 6cm → × 2 = 12cm²
+
A (tops) = Lw
= 4 × 2
= 8cm → × 2 = 16cm²

SA = 52cm²

2. This set of cubes is arranged to form a diffrent rectangular prism.

a. The volume of the shape stays the same because the cubes are just getting changed in the position not in weight, height or length.

b. Use isometric dot paper to draw examples of what the new prism could look like

c. For at least 2 of your examples calculate the area and add this together to get the surface area.

d. I would construct the prism with the most surface area by splitting the first prism in half and placing them on top of eachother to give the biggest side possible. explains more page 2

S	L	W	H	SA
A	4 cm²	2cm²	4 cm²	64cm²
B	6cm²	2cm²	2cm²	56cm²
C	4cm²	3cm²	2cm²	52cm²
D	4cm²	1cm²	6cm²	68cm²

ended up wrong

Annotations

Identifies formulas for volume and surface area of prisms.

Calculates the volume of a prism.

Calculates the surface area of a prism using appropriate units.

Demonstrates understanding of conservation of volume.

Describes how the surface area of a prism can be increased.

Records and compares calculations of area and surface area.

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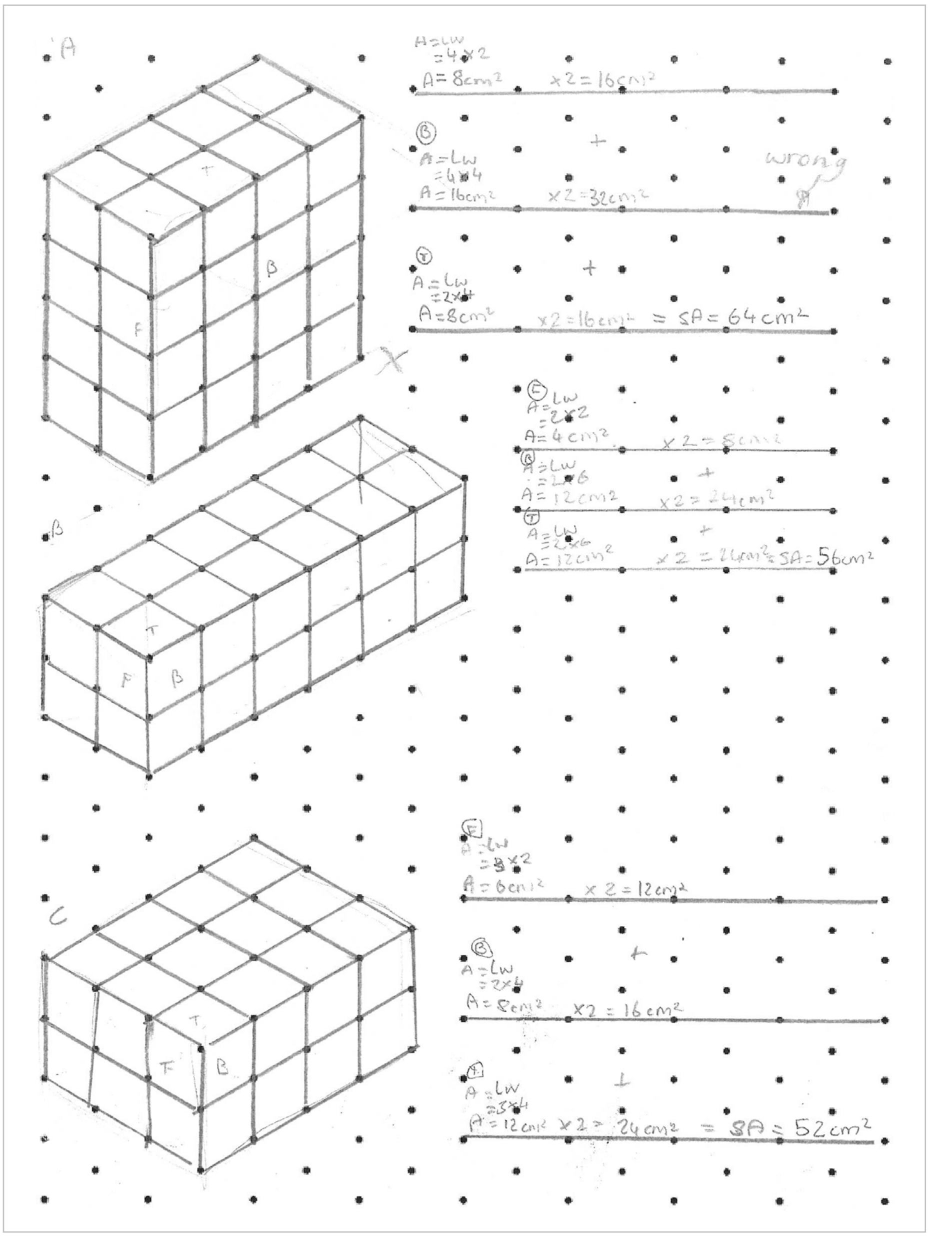
Mathematics

Year 7
Satisfactory

Measurement – Measurement investigation



Annotations

Attempts to construct prisms and to calculate surface area.

Constructs prism and calculates surface area.

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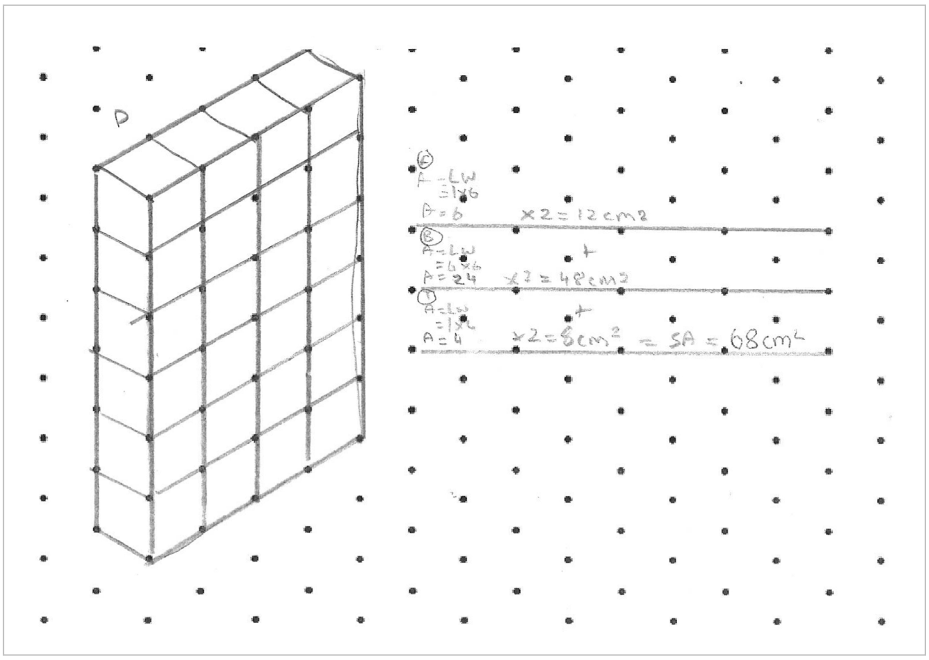
Mathematics

Year 7
Satisfactory

Measurement – Measurement investigation



Annotations

Draws prism and calculates surface area.

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Measurement – Measurement investigation

D. Shape D explains the way I would construct the prism with the Largest surface area. I would split the original shape in half and place it on top of eachother creating a prism with 4cm² length, 1cm² width and 6cm² height giving it a surface area of 68cm² which is the biggest surface I have calculated for the original prism.

F. Finding that all of the surface areas have ranged from 68cm² to 52cm². Creating the largest prism possible with 24 cubes wasn't a hard task but trying to figure out the surface are was harder. But question B explains my findings of the largest I could find. The first was 4cm² in length, 2cm² in width and 4cm² in height giving it a surface area. of 64 cm². The secound shape had a length of 6cm², width of 2cm² and a height of 2cm³ giving it a surface are of 56 cm². Shape C was my smallest surface area I calculated with a length of 4cm², Width of 3cm² and a height of 2cm² giving ~~it~~ a surface area of 52cm².

G. Shape D had the most surface area out of all 6 shapes. The amount of maths it takes is very easy and you can get alot of information such as Area, Volume, and Suface area. You learn alot such as Length, width and height. This can help you later with problems, like if you become a designer and you need to work out if a cupboards going to fit or not.

~~G~~ Shape A is wrong because there is too many cubes, sorry.

Annotations

Reflects on investigation.

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