



Sample assessment task

Year level	5
Learning area	Mathematics
Subject	Fractions and decimals
Title of task	Paper plane race

Task details

Description of task	Students are to complete the question and answer booklet on fractions.
Type of assessment	Summative assessment
Purpose of assessment	To assess students' understanding of fractions at the end of the learning cycle.
Assessment strategy	Written task
Evidence to be collected	Question and answer booklet
Suggested time	1 hour

Content description

Content from the Western Australian Curriculum	Number and Algebra			
	Fractions and Decimals			
	Compare and order common unit fractions and locate and represent them on a number line			
	Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator			
Proficiencies	Understanding	Fluency	Reasoning	Problem Solving
	✓	✓	✓	✓

Task preparation

Prior learning	Students have prior knowledge of: <ul style="list-style-type: none"> • using and creating a number line to locate and order unit fractions • adding fractions with the same denominators • comprehending and answering word problems.
Assessment differentiation	Teachers should differentiate their teaching and assessment to meet the specific learning needs of their students, based on their level of readiness to learn and their need to be challenged. Where appropriate, teachers may either scaffold or extend the scope of the assessment tasks.

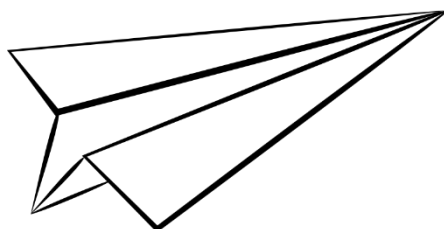
Assessment task

Assessment conditions	This is an individual, in-class assessment.
Resources	Writing materials

Instructions for teacher

Distribute question and answer booklet to students. Discuss booklet and read through questions. Ensure students understand what is expected and the space they have to show their 'working out'. Instruct students they will be completing this task individually.

Instructions to students



Four children were flying paper planes from a starting line towards a wall. The table below shows how far each plane flew from the starting line towards the wall.

Name of child	Distance to the wall
Adam	$\frac{1}{2}$
Ben	$\frac{1}{8}$
Charlie	$\frac{1}{5}$
Dana	$\frac{1}{4}$

1. Draw a diagram in the box below to show: the start line, the wall and the place where each plane landed.

Label each place with the name of the student and the fraction.

ACKNOWLEDGEMENTS

[Paper plane image: *Free airplane pictures*. (n.d.). Retrieved May, 2017, from <http://clipart-library.com/clipart/kAiba68c4.htm>]

2. Whose plane travelled the furthest? _____

Give reasons for your answer in the box below.

3. Charlie said, 'I wish my plane had flown an extra $\frac{2}{5}$ of the distance!' What fraction of the distance would the plane have flown if his wish came true? _____

Draw a diagram in the box below to explain your answer.

4. Dana said, 'My plane flew further than Adam's.' Adam disagrees. Who is correct? _____



Explain your answer in the box below.

ACKNOWLEDGEMENTS

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Sample marking key

Description	Marks
Question 1: Draw a diagram to show: the start line, the wall and the place where each plane landed. Label each place with the name of the student and the fraction.	
Diagram is a clear representation of all required elements and each plane's landing place is clearly and correctly labelled with appropriate fractional symbols and the student's name.	3
Diagram includes all required elements and each plane's landing place is labelled correctly with appropriate fractional symbols and the student's name.	2
Diagram includes some required elements and each plane's landing place is labelled; however, contains some inaccuracies or mistakes.	1
Subtotal	3
Description	Marks
Question 2: Whose plane travelled the furthest? Explain.	
Compares and accurately orders unit fractions and correctly identifies which plane travelled the furthest by determining which fraction is larger. Explains reasoning clearly, using fractional language.	3
Compares and accurately orders unit fractions and identifies which plane travelled the furthest by determining which fraction is larger. Explains reasoning, using some language of fractions.	2
Compares and orders unit fractions and identifies which plane travelled the furthest; however, some information may be inconsistent or incorrect.	1
Subtotal	3
Description	Marks
Question 3: If Charlie's plane had flown an extra $\frac{2}{5}$ of the distance, what fraction of the distance would the plane have flown? _____ Draw a diagram to explain your answer.	
Adds fractions with the same denominator correctly, using clear diagrams and fractional symbols in an equation to show reasoning.	3
Adds fractions with the same denominator, using diagrams and fractional symbols to show reasoning.	2
Adds fractions with the same denominator, using diagrams and some fractional symbols; however, some information may be incorrect.	1
Subtotal	3

Description	Marks
Question 4: Which plane flew further, Dana's or Adam's? Explain your answer.	
Uses an appropriate strategy to solve a worded problem in combination with other diagrammatical representations and correct mathematical language to correctly represent fractions.	3
Uses a strategy to solve a worded problem in combination with some diagrammatical representations and some mathematical language to represent fractions.	2
Uses a number line (or equivalent) to solve a worded problem with some inaccuracies or incorrect information.	1
Subtotal	3
Total	12