Steady Steps Maths

FREE UNIT TEST · TOPIC 6

FREE SAMPLE · UNIT TEST A

Adding & Subtracting Fractions

Unit Test A · 40 marks · about 40 minutes

GRADE 4



Common Core 4.NF.B.3a–d

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Name _____ Date _____

UNIT TEST A Adding & Subtracting Fractions

40 marks · about 40 minutes · Common Core 4.NF.B.3a–d

Name _____ **Date** _____

Instructions

- Answer **every** question in the space given.
- Show your working: in Sections B and C you get marks for your method, even if the final answer is wrong.
- The number in brackets, like [2], shows how many marks a question is worth.
- You have about 40 minutes. A calculator is **not** needed.
- Check your answers if you finish early.

Your score

Section	Questions	Marks	Your score
A · Quick questions	1–10	10	
B · Show your working	11–16	17	
C · Problem solving	17–18	13	
Total		**40**	

Percentage: _____ % 85%+ excellent · 65–84% good · 45–64% keep practising · below 45% revise the packs first

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SECTION A Quick questions

1 mark each · write your answer in the box

1 Write $\frac{3}{6}$ as a sum of unit fractions. [1]

Answer

2 Write $3\frac{2}{3}$ as a fraction. [1]

Answer

3 Write $\frac{13}{6}$ as a mixed number. [1]

Answer

4 Work out $\frac{2}{8} + \frac{2}{8}$. [1]

Answer

5 Work out $\frac{2}{4} + \frac{3}{4}$. Write the answer as a mixed number. [1]

Answer

6 Work out $\frac{8}{10} - \frac{4}{10}$. [1]

Answer

7 Work out $1 - \frac{1}{5}$. [1]

Answer

8 Work out $3\frac{5}{10} + 3\frac{1}{10}$. [1]

Answer

9 Work out $6\frac{4}{5} - 3\frac{3}{5}$. [1]

Answer

10 Sami drinks $\frac{1}{8}$ litre of water in the morning and $\frac{6}{8}$ litre in the afternoon. How much does Sami drink altogether? [1]

Answer

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SECTION B

Show your working

Marks are given for your method

11 Write $\frac{5}{6}$ as a sum of fractions with the denominator 6 in two different ways. [2]

Answer

12 Work out $2\frac{4}{6} + 2\frac{3}{6}$. Show your working. [3]

Answer

13 Work out $5\frac{4}{8} - 2\frac{5}{8}$. Show your working. [3]

Answer

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14 Omar says $\frac{1}{5} + \frac{2}{5} = \frac{3}{10}$. [3]
(a) What mistake did Omar make? (b) Work out the correct answer.

Answer

15 A rope is 6 m long. $4\frac{2}{5}$ m is cut off. How long is the rope that is left? [2]

Answer

16 Sara plants a garden. $\frac{2}{12}$ of the garden is carrots and $\frac{3}{12}$ is beans. The rest is grass. [4]
(a) What fraction of the garden is carrots and beans together? (b) What fraction of the garden is grass?

Answer

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SECTION C Problem solving

Longer questions with several steps

17 Dana runs $2\frac{3}{4}$ km on Monday, $3\frac{2}{4}$ km on Tuesday and $3\frac{1}{4}$ km on Wednesday. [7]

(a) How far does Dana run on Monday and Tuesday altogether?

(b) How much further does Dana run on Wednesday than on Monday?

(c) Dana wants to run 11 km in these three days. How much further does Dana need to run?

Answer

18 A jug holds 8 litres of juice. Nora pours $1\frac{6}{8}$ litres into one bottle and $1\frac{4}{8}$ litres into another bottle. [6]

(a) How much juice does Nora pour altogether? (b) How much juice is left in the jug?

(c) Lina says more than half of the juice is still in the jug. Is Lina right? Explain.

Answer

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Mark scheme

For parents · give the marks shown; method marks can be given even if the final answer is wrong

Tip: Give method marks generously when the working shows the right idea. If a mistake early on is carried through correctly, give the later marks. Accept equivalent fractions and mixed numbers unless a form is asked for.

Q	Answer	Marks	How to award the marks
1	$\frac{1}{6} + \frac{1}{6} + \frac{1}{6}$	1	
2	$\frac{11}{3}$	1	
3	$2\frac{1}{6}$	1	
4	$\frac{4}{8}$ ($\frac{1}{2}$ also accepted)	1	
5	$1\frac{1}{4}$	1	
6	$\frac{4}{10}$ ($\frac{2}{5}$ also accepted)	1	
7	$\frac{4}{5}$	1	
8	$6\frac{6}{10}$ ($6\frac{3}{5}$ also accepted)	1	
9	$3\frac{1}{5}$	1	
10	$\frac{7}{8}$ litre	1	
11	e.g. $\frac{1}{6} + \frac{4}{6}$ or $\frac{2}{6} + \frac{3}{6}$	2	1 mark each (any two ways whose numerators add up to 5).
12	$5\frac{1}{6}$	3	1 mark for the wholes (4); 1 for the fractions ($\frac{7}{6}$); 1 for regrouping.
13	$2\frac{7}{8}$	3	1 mark for regrouping ($5\frac{4}{8} = 4\frac{12}{8}$) or using fractions; 1 for subtracting; 1 for the answer.
14	(a) added the denominators (only the numerators are added) (b) $\frac{3}{5}$	3	(a) 1 mark. (b) 2 marks: 1 for adding only the numerators.
15	$1\frac{3}{5}$ m	2	1 mark for the method (e.g. $6 = 5\frac{5}{5}$); 1 for the answer.
16	(a) $\frac{5}{12}$ (b) $\frac{7}{12}$	4	(a) 2 marks. (b) 2 marks: 1 for using $1 = \frac{12}{12}$.
17	(a) $6\frac{1}{4}$ km (b) $\frac{2}{4}$ km ($\frac{1}{2}$ km also accepted) (c) $9\frac{2}{4}$ km run, so $1\frac{2}{4}$ km ($1\frac{1}{2}$ km also accepted) more	7	(a) 2 marks: 1 for regrouping. (b) 2 marks: 1 for regrouping a whole. (c) 3 marks: 1 for the total, 1 for subtracting from 11, 1 for the answer.
18	(a) $3\frac{2}{8}$ litres ($3\frac{1}{4}$ litres also accepted) (b) $4\frac{6}{8}$ litres ($4\frac{3}{4}$ litres also accepted) (c) Yes: half is 4 litres and $4\frac{6}{8} > 4$	6	(a) 2 marks. (b) 2 marks: 1 for the method. (c) 2 marks: 1 for the answer, 1 for the reason.

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What to revise

Circle the questions your child lost marks on, then go back to the matching part of the pack

Questions	Skill	Revise in	✓ / ×
1	Sums of unit fractions	Pack 1 · Building Fractions from Unit Fractions, Part 1	
2, 3	Mixed numbers and fractions	Pack 1 · Building Fractions from Unit Fractions, Part 3	
4, 5, 14	Adding fractions	Pack 2 · Like Denominators & Mixed Numbers, Part 1	
6, 7	Subtracting fractions	Pack 2 · Like Denominators & Mixed Numbers, Part 2	
8, 12	Adding mixed numbers	Pack 2 · Like Denominators & Mixed Numbers, Part 3	
9, 13	Subtracting mixed numbers	Pack 2 · Like Denominators & Mixed Numbers, Part 4	
10	Adding problems	Pack 3 · Fraction Word Problems, Part 1	
11	Splitting fractions	Pack 1 · Building Fractions from Unit Fractions, Part 2	
15	Problems with mixed numbers	Pack 3 · Fraction Word Problems, Part 3	
16	Two-step problems	Pack 3 · Fraction Word Problems, Part 4	
17	Adding and subtracting mixed numbers	Pack 2 · Like Denominators & Mixed Numbers, Parts 3 and 4 and Pack 3 · Fraction Word Problems, Part 4	
18	Two-step problems	Pack 3 · Fraction Word Problems, Parts 3 and 4	

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