Steady Steps Maths

FREE UNIT TEST · TOPIC 3

FREE SAMPLE · UNIT TEST A

Dividing Fractions

Unit Test A · 40 marks · about 40 minutes

GRADE 6



Common Core 6.NS.A.1

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Name _____ Date _____

UNIT TEST A

Dividing Fractions

40 marks · about 40 minutes · Common Core 6.NS.A.1

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 the reciprocal of $\frac{2}{9}$. [1]

Answer

2 Write the reciprocal of 8. [1]

Answer

3 Work out $3 \div \frac{1}{2}$. [1]

Answer

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

Answer

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

Answer

6 Work out $\frac{1}{6} \div \frac{1}{4}$. [1]

Answer

7 Write $1\frac{5}{8}$ as an improper fraction. [1]

Answer

8 How many $\frac{1}{5}$s are in 6? [1]

Answer

9 Without working it out: is $11 \div \frac{1}{4}$ bigger or smaller than 11? [1]

Answer

10 Write a multiplication that checks $\frac{5}{6} \div \frac{1}{4} = 3\frac{1}{3}$. [1]

Answer

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SECTION B Show your working

Marks are given for your method

11 Work out $\frac{2}{5} \div \frac{1}{3}$. Give your answer in simplest form. [2]

Answer

12 Work out $6\frac{1}{4} \div 4\frac{1}{6}$. [3]

Answer

13 Work out $3\frac{3}{4} \div \frac{1}{3}$. [3]

Answer

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14 A ribbon is $7\frac{1}{2}$ m long. It is cut into pieces that are each $\frac{5}{6}$ m long. How many pieces are there? [3]

Answer

15 A rectangle has an area of $\frac{15}{16}$ m² and a length of $1\frac{1}{4}$ m. What is its width? [3]

Answer

16 Omar says $\frac{7}{10} \div \frac{1}{3} = \frac{7}{30}$. Check his answer using multiplication. Is he right? [3]

Answer

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SECTION C Problem solving

Longer questions with several steps

17 A recipe for one batch of biscuits uses $\frac{1}{2}$ cup of sugar. Rana has $4\frac{1}{2}$ cups of sugar. [7]

(a) How many batches can she make?

(b) She makes 3 batches. How much sugar has she used?

(c) How much sugar is left? How many more batches could she make with it?

Answer _____

18 A walking trail is $7\frac{1}{2}$ km long. There is a marker post every $1\frac{1}{2}$ km, starting from the beginning. [6]

(a) How many sections of $1\frac{1}{2}$ km are there?

(b) Sami walks each section in $\frac{1}{2}$ of an hour. How long does the whole trail take him?

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.

Q	Answer	Marks	How to award the marks
1	9/2 (= 4 1/2)	1	Accept an improper fraction.
2	1/8	1	
3	6	1	
4	1/4	1	
5	2	1	
6	2/3	1	Accept equivalent fractions.
7	13/8	1	
8	30	1	
9	bigger	1	Dividing by a number less than 1 gives a bigger answer.
10	3 1/3 × 1/4 = 5/6	1	Either order of the multiplication.
11	1 1/5	2	1 mark for 2/5 × 3; 1 mark for the simplified answer. Accept an improper fraction.
12	1 1/2	3	1 mark for 25/4 ÷ 25/6; 1 mark for multiplying by the reciprocal; 1 mark for the answer.
13	11 1/4	3	1 mark for the improper fraction; 1 mark for multiplying by the reciprocal; 1 mark for the answer.
14	9 pieces	3	1 mark for writing 7 1/2 ÷ 5/6; 1 mark for a correct method; 1 mark for 9.
15	3/4 m	3	1 mark for 15/16 ÷ 1 1/4; 1 mark for method; 1 mark for the answer.
16	no: 7/30 × 1/3 = 7/90, not 7/10; the answer is 2 1/10	3	1 mark for multiplying the answer by the divisor; 1 mark for the correct product; 1 mark for the conclusion.
17	(a) 9 (b) 1 1/2 cups (c) 3 cups; 6 more batches	7	(a) 3 marks: 1 for the division, 1 for the method, 1 for the answer. (b) 2 marks: 1 for multiplying, 1 for the answer. (c) 2 marks: 1 for the amount left, 1 for the batches.
18	(a) 5 sections (b) 2 1/2 hours	6	(a) 3 marks: 1 for the division, 1 for method, 1 for the answer. (b) 3 marks: 1 for multiplying sections by the time, 1 for method, 1 for the answer.

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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, 2	Reciprocals	Pack 1 · Dividing Fractions, Part 1	
3	Whole number ÷ fraction	Pack 1 · Dividing Fractions, Part 2	
4	Fraction ÷ whole number	Pack 1 · Dividing Fractions, Part 3	
5, 6, 10, 11, 16	Fraction ÷ fraction	Pack 1 · Dividing Fractions, Part 4	
7	Mixed numbers to improper fractions	Pack 2 · Dividing Mixed Numbers, Part 1	
8, 14, 18	How many fit?	Pack 3 · Fraction Division Problems, Part 2	
9	Making sense of the answer	Pack 3 · Fraction Division Problems, Part 4	
12	Mixed number ÷ mixed number	Pack 2 · Dividing Mixed Numbers, Part 4	
13	Mixed numbers and fractions	Pack 2 · Dividing Mixed Numbers, Part 3	
15	How much in each?	Pack 3 · Fraction Division Problems, Part 3	
17	Fraction division in a problem	Pack 3 · Fraction Division Problems, Part 2 and Part 4	

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