Steady Steps Maths

FREE UNIT TEST · TOPIC 6

FREE SAMPLE · UNIT TEST A

Equivalent & Comparing Fractions

Unit Test A · 40 marks · about 40 minutes

GRADE 3



Common Core 3.NF.A.3a–d

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Name _____ Date _____

UNIT TEST A Equivalent & Comparing Fractions

40 marks · about 40 minutes · Common Core 3.NF.A.3

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. Find the missing number: $\frac{1}{4} = \frac{\square}{8}$ [1]
Answer

2. Find the missing number: $\frac{\square}{3} = \frac{2}{6}$ [1]
Answer

3. Write 1 whole as a fraction with denominator 6. [1]
Answer

4. Write 8 as a fraction with denominator 1. [1]
Answer

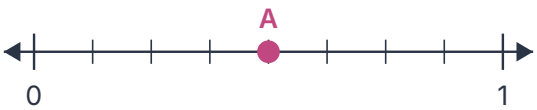
5. Write <, > or = : $\frac{6}{8}$ ___ $\frac{3}{8}$ [1]
Answer

6. Write <, > or = : $\frac{1}{8}$ ___ $\frac{1}{6}$ [1]
Answer

7. Write $\frac{12}{3}$ as a whole number. [1]
Answer

8. How many $\frac{1}{2}$ make 2 wholes? [1]
Answer

9. Point A is at $\frac{4}{8}$. Write the same point as a fraction with denominator 4. [1]



Answer

10. True or false? $\frac{1}{2} = \frac{2}{4}$ [1]
Answer

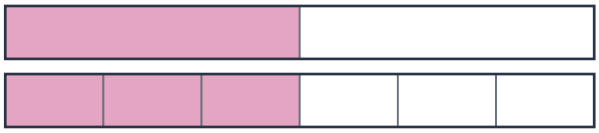
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SECTION B Show your working

Marks are given for your method

11 The two strips are the same size. Use them to write two equivalent fractions. [2]



Answer

12 Put these fractions in order, smallest first: $\frac{5}{6}$, $\frac{1}{6}$, $\frac{2}{6}$. Explain how you know. [3]

Answer

13 Which is bigger, $\frac{1}{2}$ or $\frac{1}{8}$? Explain why. [3]

Answer

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14 The number line goes from 0 to 3. Each whole is split into thirds. Write the fractions in the two boxes. Which whole numbers are they equal to? [3]



Answer

15 Omar says $\frac{1}{3} < \frac{1}{6}$ because 6 is bigger than 3. Is that right? Explain. [2]

Answer

16 Two pizzas are the same size, each cut into 8 equal slices. Rana eats $\frac{4}{8}$ of one pizza and Maya eats $\frac{6}{8}$ of the other. (a) Who eats more? Write a comparison with < or >. (b) Karim eats $\frac{3}{4}$ of a third pizza of the same size. How many eighths is that? (c) Does Karim eat more than Rana? [4]

Answer

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SECTION C Problem solving

Longer questions with several steps

17 Two cakes are the same size. Cake A is cut into 3 equal pieces. Cake B is cut into 6 equal pieces. [7]

(a) What fraction of cake A is one piece? What fraction of cake B is one piece? (b) Which piece is bigger? Explain.

(c) Sana eats 2 pieces of cake A. How many pieces of cake B are the same amount?

(d) Write your answer to (c) as two equivalent fractions.

Answer

18 Use the number line. [6]

(a) Write the fraction at each small mark between 0 and 1. (b) Mark $\frac{6}{8}$ with a dot. Which fraction with denominator 4 is at the same point?

(c) Write 1 as a fraction with denominator 8. (d) Put in order, smallest first: 1, $\frac{1}{8}$, $\frac{7}{8}$



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 any equivalent fraction or correct comparison (e.g. 2/8 < 7/8 for 7/8 > 2/8) unless the question asks for a particular denominator.

Q	Answer	Marks	How to award the marks
1	2	1	
2	1	1	
3	6/6	1	
4	8/1	1	
5	>	1	
6	<	1	
7	4	1	
8	4	1	
9	2/4	1	
10	true	1	
11	1/2 = 3/6	2	1 mark for each fraction.
12	1/6, 2/6, 5/6; same-size parts, so more parts means bigger	3	2 marks for the order (1 if one swap); 1 mark for the reason.
13	1/2: the whole is cut into fewer parts, so each part is bigger	3	1 mark for the answer; 2 marks for a clear reason (1 for a partial reason or a correct drawing).
14	3/3 = 1 and 6/3 = 2	3	1 mark for each fraction; 1 mark for 1 and 2.
15	No: 1/3 > 1/6. Sixths are smaller parts than thirds.	2	1 mark for “no”; 1 mark for the reason about part size.
16	(a) Maya: 4/8 < 6/8 (b) 6/8 (c) yes	4	(a) 2 marks: 1 for the name, 1 for the comparison. (b) 1 mark. (c) 1 mark.
17	(a) 1/3 and 1/6 (b) a piece of A: fewer pieces means bigger pieces (c) 4 pieces (d) 2/3 = 4/6	7	(a) 2 marks. (b) 2 marks: 1 for the answer, 1 for the reason. (c) 2 marks. (d) 1 mark. Follow through.
18	(a) 1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8 (b) 3/4 (c) 8/8 (d) 1/8, 7/8, 1	6	(a) 2 marks (1 if one slip). (b) 2 marks: 1 for the dot, 1 for the fraction. (c) 1 mark. (d) 1 mark.

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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	Missing numbers	Pack 1 · Equivalent Fractions, Part 3	
3	Fractions equal to 1	Pack 2 · Whole Numbers as Fractions, Part 1	
4, 7, 8, 14	Whole numbers as fractions	Pack 2 · Whole Numbers as Fractions, Parts 2–3	
5, 12	Same denominator	Pack 3 · Comparing Fractions, Part 1	
6, 13, 15	Same numerator	Pack 3 · Comparing Fractions, Part 2	
9	Same point on a number line	Pack 1 · Equivalent Fractions, Part 2	
10, 11	Equivalent fractions	Pack 1 · Equivalent Fractions, Part 1	
16	Comparing in stories	Pack 3 · Comparing Fractions, Part 4 and Pack 1 · Equivalent Fractions, Part 4	
17	Equivalent fractions and part size	Pack 1 · Equivalent Fractions, Part 4 and Pack 3 · Comparing Fractions, Part 2	
18	Fractions on a number line	Pack 1 · Equivalent Fractions, Part 2 and Pack 2 · Whole Numbers as Fractions, Part 1	

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