Steady Steps Maths

FREE UNIT TEST · TOPIC 3

FREE SAMPLE · UNIT TEST A

Two-Step Problems & Patterns

Unit Test A · 40 marks · about 40 minutes

GRADE 3



Common Core 3.OA.D.8–9

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

UNIT TEST A Two-Step Problems & Patterns

40 marks · about 40 minutes · Common Core 3.OA.D.8–9

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

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

SECTION A Quick questions

1 mark each · write your answer in the box

1. Maya has 58 cards, gets 17 more, then gives away 20. How many cards does Maya have now? [1]

   Answer

2. There are 5 packs of 8 pens and 8 loose pens. How many pens altogether? [1]

   Answer

3. Work out (45 – 10) ÷ 5 [1]

   Answer

4. Find n: n = 3 × 7 + 2 [1]

   Answer

5. Round each number to the nearest ten to estimate 60 + 21. [1]

   Answer

6. Is 88 odd or even? [1]

   Answer

7. Is the sum of two odd numbers, like 3 + 13, odd or even? [1]

   Answer

8. What is the rule? 12, 16, 20, 24, ... [1]

   Answer

9. In an addition table, the row for 6 and the column for 8 meet. What number is there? [1]

   Answer

10. Are all the numbers in the 8 times table odd, even, or a mix? [1]

    Answer

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

SECTION B Show your working

Marks are given for your method

11 A shop has 3 boxes of 8 oranges. It sells 10 oranges. How many are left? Show both steps. [2]

Answer

12 Fares has 28 beads and buys 14 more. All the beads are shared equally into 6 bags.
Write an equation with a letter for the beads in each bag. Then solve it. [3]

Answer

13 Omar works out 291 + 281 − 259 and gets 313. [3]
(a) Round each number to the nearest hundred and estimate. (b) Is Omar's answer reasonable? Explain.

Answer

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

14 In the addition table: 6 + 5 = 11, 6 + 6 = 12, 7 + 5 = ___, 7 + 6 = ___. [3]
(a) Fill in the two missing numbers. (b) What happens to the sum when one number goes up by 1?

Answer

15 Look at the 4 times table: 4, 8, 12, 16, 20, ... [2]
Explain why every number in it is even.

Answer

16 A pattern starts at 9 and adds 5 each time. [4]
(a) Write the first 6 numbers. (b) Are the numbers odd, even, or does it switch? Explain.

Answer

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

SECTION C Problem solving

Longer questions with several steps

17 Adult tickets cost 9 and child tickets cost 3 at a museum. A family buys 4 adult tickets and 5 child tickets. [7]

(a) How much do the adult tickets cost? (b) How much do all the tickets cost?

(c) They pay with 60. How much change do they get?

(d) Round each cost to the nearest ten to check that your answer to (b) is reasonable.

Answer

18 Here is the 7 times table: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 [6]

(a) Which numbers in it are odd? (b) Describe the pattern of odd and even numbers. (c) Without working it out, will 7 × 13 be odd or even? Explain.

Answer

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

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	55	1	
2	48	1	
3	7	1	
4	n = 23	1	
5	60 + 20 = 80	1	
6	even	1	
7	even (16)	1	
8	add 4 (the 4 times table)	1	
9	14	1	
10	even	1	
11	3 × 8 = 24; 24 − 10 = 14	2	1 mark for each step.
12	b = (28 + 14) ÷ 6; b = 7	3	1 mark for an equation with a letter (any correct form, e.g. 6 × b = 42); 1 mark for adding first; 1 mark for the answer.
13	(a) 300 + 300 − 300 = 300 (b) yes, near the estimate, so reasonable (exact 313)	3	2 marks for the estimate (1 for rounding); 1 mark for a sensible judgement with a reason.
14	(a) 12, 13 (b) the sum goes up by 1	3	1 mark for each missing number; 1 mark for the pattern.
15	4 is even (4 = 2 + 2), so 4 × any number is a double, and doubles are always even.	2	1 mark for “all even”; 1 mark for a reason.
16	(a) 9, 14, 19, 24, 29, 34 (b) they switch odd, even, odd … (adding an odd number)	4	(a) 2 marks (1 mark if one slip). (b) 2 marks: 1 for the pattern, 1 for the reason.
17	(a) 4 × 9 = 36 (b) 36 + 15 = 51 (c) 60 − 51 = 9 (d) e.g. 36 + 15 ≈ 40 + 20 = 60, close to 51	7	(a) 1 mark. (b) 2 marks: 1 for the child tickets. (c) 2 marks. (d) 2 marks for a sensible rounding check. Follow through.
18	(a) 7, 21, 35, 49, 63 (b) odd, even, odd, even … (they take turns) (c) odd: odd × odd is odd	6	(a) 2 marks (1 if one is missing). (b) 2 marks. (c) 2 marks: 1 for the answer, 1 for the reason.

Licensed for use by one family. Please do not share, upload or resell.

Name _____ Date _____

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	Two steps with + and −	Pack 1 · Two-Step Word Problems, Part 1	
2, 3, 11	Two steps with × and ÷	Pack 1 · Two-Step Word Problems, Part 2	
4, 12	Equations with a letter	Pack 1 · Two-Step Word Problems, Part 3	
5, 13	Is the answer reasonable?	Pack 1 · Two-Step Word Problems, Part 4	
6, 7	Odd and even	Pack 2 · Patterns in Number Tables, Part 1	
8	Number patterns	Pack 2 · Patterns in Number Tables, Part 4	
9, 14	The addition table	Pack 2 · Patterns in Number Tables, Part 2	
10, 15	The multiplication table	Pack 2 · Patterns in Number Tables, Part 3	
16	Number patterns	Pack 2 · Patterns in Number Tables, Parts 1 and 4	
17	Two-step problems	Pack 1 · Two-Step Word Problems, Parts 1, 2 and 4	
18	Patterns in the multiplication table	Pack 2 · Patterns in Number Tables, Parts 1 and 3	

Licensed for use by one family. Please do not share, upload or resell.