Steady Steps Maths

FREE SAMPLE WORKSHEET · TOPIC 1

FREE SAMPLE

Ratios & Rates

Free sample worksheet · with answers

GRADE 6

lemons	2	4	6
water	5	10	15

$$2 : 5 = 4 : 10 = 6 : 15$$

Common Core 6.RP.A.1–3

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Quick recap

The big idea from each pack in this topic. Read it first, then try the questions.

Learn it · Pack 1 · Writing ratios

A ratio compares two amounts. Order matters: the thing named first is written first.
5 red and 3 blue counters: red to blue is **5 : 3**. You can also write **5 to 3** or **5/3**.
Part-to-whole: red to all the counters is **5 : 8**.

Learn it · Pack 2 · Equivalent ratios

Multiply or divide both numbers by the same number: 2 : 3 = 4 : 6 = 10 : 15.
To share 30 in the ratio 2 : 3, add the parts (5), find one part (30 ÷ 5 = 6), then multiply: **12 and 18**.

Learn it · Pack 3 · Unit rates

A unit rate tells you how much for **one**. 120 km in 2 hours → 120 ÷ 2 = **60 km per hour**.
Best buy: work out the price of one item for each offer, then compare.

Learn it · Pack 4 · Converting units

1 m = 100 cm · 1 km = 1,000 m · 1 kg = 1,000 g · 1 L = 1,000 mL · 1 hour = 60 minutes
Big unit → small unit: multiply (2.5 m = **250 cm**). Small unit → big unit: divide (4,500 g = **4.5 kg**).

PACK 1 Understanding Ratios

1. A box has 7 pencils and 4 erasers. Write the ratio of erasers to pencils.

Answer _____

2. A class has 13 boys and 11 girls. Write the ratio of girls to all the students.

Answer _____

3. Write the ratio 6 : 5 in two other ways.

Answer _____

4. For every 2 cups of rice you use 3 cups of water. Write the ratio of water to rice.

Answer _____

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PACK 2 Equivalent Ratios & Ratio Tables

5 Find the missing number: 3 : 5 = 12 : ☐

Answer

6 Write 18 : 24 in its simplest form.

Answer

7 Lemonade uses lemons and cups of water in the same ratio. Complete the table.

lemons	2	4		10
water	7		21	

Answer

8 Share 35 sweets between Ali and Sara in the ratio 3 : 4.

Answer

PACK 3 Unit Rates & Unit Price

9 A car travels 240 km in 3 hours at a steady speed. What is its speed in km per hour?

Answer

10 6 notebooks cost 9.00. How much does 1 notebook cost?

Answer

11 Which is the better buy: 4 juice boxes for 3.00 or 6 juice boxes for 4.20?

Answer

12 Huda types 45 words per minute. How many words does she type in 8 minutes?

Answer

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PACK 4

Converting Units

13 Convert 3.6 m to centimetres.

Answer

14 Convert 2,750 g to kilograms.

Answer

15 How many minutes are in 3.5 hours?

Answer

16 A jug holds 1.8 L. How many 200 mL cups can it fill?

Answer

Real life

Read carefully, then show your working

17 Green paint is made by mixing blue and yellow paint in the ratio 2 : 5. Rami needs 21 litres of green paint.
(a) How many litres of blue and of yellow paint does he need? (b) Blue paint costs 4.50 per litre. How much does the blue paint cost?

Answer

18 A runner covers 5 km in 25 minutes at a steady pace.
(a) How many minutes does she take for each kilometre? (b) At this pace, how long would 14 km take? Give your answer in hours and minutes.

Answer

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Answer key

For parents · check the steps as well as the final answer

Pack 1	**1)** 4 : 7 **2)** 11 : 24 **3)** 6 to 5 and 6/5 **4)** 3 : 2
Pack 2	**5)** 20 **6)** 3 : 4 **7)** 4 lemons → 14 cups; 21 cups → 6 lemons; 10 lemons → 35 cups **8)** Ali 15, Sara 20
Pack 3	**9)** 80 km per hour **10)** 1.50 **11)** 6 for 4.20 (0.70 each, not 0.75) **12)** 360 words
Pack 4	**13)** 360 cm **14)** 2.75 kg **15)** 210 minutes **16)** 9 cups
Real life	**17)** (a) 6 L blue, 15 L yellow (b) 27.00 **18)** (a) 5 minutes per km (b) 70 minutes = 1 hour 10 minutes

Tip: The most common slip is writing a ratio the wrong way round. Ask your child to point to the amount named first before writing.

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Enjoyed this sample?

This sheet has 18 questions. The full topic has 202, plus 10 unit tests.

Everything a Grade 6 student needs on ratios and rates: writing and comparing ratios, ratio tables and diagrams, unit rates and best buys, and converting measurement units.

What you get	What's inside	Questions
Pack 1 · Understanding Ratios	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.RP.A.1	55
Pack 2 · Equivalent Ratios & Ratio Tables	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.RP.A.3a	50
Pack 3 · Unit Rates & Unit Price	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.RP.A.2 · 6.RP.A.3b	51
Pack 4 · Converting Units	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.RP.A.3d	46
Complete Topic book	All 4 packs in one book with a contents page	202
10 Unit Tests (A–J)	40 marks each, about 40 minutes, with a mark scheme and a “what to revise” table. **Test A is free.**	18 per test

How to use this sample

1. Let your child read the recap page and try the questions on their own.
2. Mark together with the answer key. Each section shows which pack it comes from.
3. If a section felt hard, that pack is the place to start. If it all felt easy, try the free Unit Test A.

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