

## Practice Exam Questions – Level 1, Adult Numeracy.

**Level 1 Adult Numeracy questions: ratio and proportion.**

Allow about 20 minutes.

**You may NOT use a calculator. Bilingual dictionaries may be used.**

**Level 1 – N1 (whole numbers). Ratio and Proportion**

**N1/L1.7** Work out simple ratio and direct proportion

(a) understand simple ratio as the number of parts, e.g. three parts to one part

(b) understand direct proportion as the same rate of increase or decrease, e.g. double, half

1. The label on a large bottle of juice states 'dilute 1 part juice to 3 parts water'. How much water must be added to 2 litres of juice?

- A 0.5 litres
- B 1.5 litres
- C 6 litres
- D 8 litres



2.



This recipe is for 4 fruit scones.

- 200g flour
- 2 eggs
- 100ml milk
- 50g currants

How much flour would be needed to make 6 of these fruit scones?

- A 30g
- B 300g
- C 400g
- D 1 200g

3. A stall holder is making muffins to sell at a village fair. His recipe makes 12 muffins.

- 300g flour
- 1 level teaspoon baking powder
- 90g sugar
- 250ml milk
- 2 eggs
- 4 tablespoons sunflower oil

How much flour does he need to make 60 muffins?

- A 150g
- B 1500g
- C 1800g
- D 18 000g

4. Due to falling profit, 600 shop workers lose their jobs. 480 of these are women. What is the ratio of men to women who lose their jobs?

- A 1 : 5
- B 1 : 4
- C 4 : 1
- D 5 : 1

5. A pool attendant adds chemicals to the pool each day. He mixes chemicals labelled 'Fresh' and 'Safe' in a ratio of 3 : 2.

How much 'fresh' is there in one litre of mixture?

- A  $\frac{2}{5}$  litre
- B  $\frac{3}{5}$  litre
- C  $\frac{5}{3}$  litre
- D  $\frac{3}{2}$  litre



6. A man lives 1 km from a shop. It takes him 15 minutes to walk to the shop. His walking speed is

- A 4 metres per minute
- B 4 kilometres per minute
- C 4 metres per hour
- D 4 kilometres per hour

7. Jane and Tom spend £5 between them on their lottery tickets each week. Jane puts in £1 and Tom puts in £4. They have agreed to share the winnings according to the amount they put in.



One week they win £45 000. How much will they get each?

- A Jane will get £15 000 and Tom will get £30 000
- B Jane will get £11 000 and Tom will get £34 000
- C Jane will get £10 000 and Tom will get £35 000
- D Jane will get £9 000 and Tom will get £36 000

8. Lee has a recipe for fruit punch which makes 15 glasses. Lee decides to make just enough fruit punch for 75 glasses.

**FRUIT PUNCH**

500ml orange juice  
500ml pineapple juice  
50ml lemon juice  
1l sparkling water

How many millilitres (ml) of lemon juice will he need?

- A 50ml
- B 75ml
- C 250ml
- D 500ml

9. The British Heart Foundation recommends that children between the ages of 5 to 18 should spend at least an hour a day doing something active. Yet their research shows that one in three do not get nearly enough exercise. As a ratio is this:

- A 1:3
- B 1:2
- C 1:4
- D 1:1

Questions 10 to 11 are about a nursery school.

The school decides to take 20 children on a trip to the zoo.

10. For safety, the ratio of adults to children must be at least 1 : 4. How many adults are required for safety?

- A 1
- B 4
- C 5
- D 6



11. The group goes to the zoo in cars. Each car can hold 4 people. How many cars would they need altogether?

- A 5
- B 6
- C 7
- D 10

12. Try converting a home-size recipe into restaurant size!

If a home-size recipe uses three-quarters of a teaspoon of a spice how many teaspoons of the spice would be needed for 10 times the quantity?

- A 8 teaspoons
- B 6.5 teaspoons
- C 5 teaspoons
- D 7.5 teaspoons

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**Answers**

1	2	3	4	5	6	
7	8	9	10	11	12	Total

**Tutor Comments**

## Answer sheet

### Level 1 Ratio questions

- |    |   |                              |
|----|---|------------------------------|
| 1  | – | C (6 litres)                 |
| 2  | – | B (300g)                     |
| 3  | – | B (1500g)                    |
| 4  | – | B (1:4)                      |
| 5  | – | B (3/5 litre)                |
| 6  | – | D (4 kilometres per hour)    |
| 7  | – | D (Jane £9 000, Tom £36 000) |
| 8  | – | C (250ml)                    |
| 9  | – | B (1:2)                      |
| 10 | – | C (5 adults)                 |
| 11 | – | C (7 cars)                   |
| 12 | – | D (7.5 teaspoons)            |

**Allow about 20 minutes.**