Ratio and proportion quiz

Level A

1. 1m of ribbon is cut into 5 equal lengths. To work this out…..

    A) divide 100 cm by 5
    B) 1 m multiplied by 5
    C) 1m minus 5

2. If 500 g of fruit is needed to make a fruit crumble for four people, then 250 g would be enough for just two people.

    A) True
    B) False

3. In a group of 10 diners in a restaurant, 5 are vegetarians. As a proportion of the whole group, half are vegetarians.

    A) True
    B) False

4. A man earns £15 an hour as a gardener. How much is that per half-hour?

    A) £10
    B) £7.50
    C) £30

5. Divide £25 between 2 people:

    A) £12
    B) £2.50
    C) £12.50

6. Barleyade: Pour equal quantities of lemon barley and lemonade into a tumbler, add ice and a slice of lemon. How much lemon barley will you add to 50 cl of lemonade?

    A) 100 cl
    B) 50 cl
    C) 75 cl

Ratio and proportion quiz

7. Two people working together normally take ½ a day to fit a new boiler.

   It is likely to take longer if there is only one person on the job. True or False?

   A) False
   B) True

8. If you are scaling down this recipe for bread and only using 250g flour how much salt should you add?

   500g flour
   2 teaspoons of salt
   7g dry yeast
   4 tablespoons of olive oil
   300ml water

   A) 1 tsp
   B) 1.5 tsp
   C) 2.5 tsp

9. A shopkeeper has increased her orders for The Times newspaper (from 20 copies to 60 copies) and The Guardian (from 25 copies to 75 copies). In what proportion has she increased her order?

   A) × 3
   B) × 4
   C) × 5

10. A student scores 7 out of 10 in a class test. What is the equivalent score out of 100?

    A) 30
    B) 70
    C) 75

Ratio and proportion quiz

Level B

1. Which of these currency exchange rates is equal to €150 for £100?

   A) €10 for £6
   B) €1.50 for £1.00
   C) £1.00: €1.05

2. A cake recipe calls for 3 cups of flour and ½ teaspoon of baking powder. What proportions of flour and baking powder will I need to make half the quantity?

   A) 6 cups flour and 1 tsp baking powder
   B) 1½ cups flour and ¼ tsp baking powder
   C) ¼ cup flour and 1½ tsp baking powder

3. A machine makes 12 articles in an hour. How many articles can it make in 6 hours?

   A) 72
   B) 36
   C) 144

4. A machine makes 6 articles in an hour. How many hours does it take to make 48 articles?

   A) 2 hours
   B) 4 hours
   C) 8 hours

5. Which is the better value portion of cheese?

   A) 15 g for 36p
   B) 10 g for 20p

6. Which is the better value for apples?

   A) 1 kg for £1.20

Ratio and proportion quiz

B) 0.5 kg for 70p

7. The exchange rate between £ and Euros, €, is €1.10 € to £1.

   How many € will I get for £20?

   A) €22
   B) €22.20
   C) €222

8. The exchange rate between £ and dollars, US$, is US$1.60 to £1.

   How many $ will I get for £20?

   A) $35
   B) $32
   C) $16

9. A map has a scale where 2 cm represents 1 km

   TRUE or FALSE - 5 cm represents 5 km.

   A) True
   B) False

10. A map has a scale where 3cm represents 1 km.

    TRUE or FALSE - 15 cm represents 5 km.

    A) True
    B) False

Ratio and proportion quiz

Level C

1. Robin drove 90 miles in an hour and a half. At this rate, how many miles will he have driven in 4 hours?

   A) 180 miles
   B) 200 miles
   C) 240 miles

2. Declan ran 500 metres in 5 minutes. What is this as a rate per minute?

   A) 50 metres per minute
   B) 100 metres per minute
   C) 0.1 metres per minute

3. Sheila walks about 4½ miles every day. If she walks about 3 miles per hour, how long does her walk take?

   A) 9 hours
   B) 45 minutes
   C) 1.5 hours

4. 5 hours to travel 360 miles is about _____mph

   A) 50 mph
   B) 60 mph
   C) 70 mph

5. Instructions on a packet of couscous say "Pour 300 ml of boiling hot water over 250 g of couscous and leave to stand for 5 minutes. Serves 4". What proportion of couscous and water is needed for 2 servings?

   A) 300 ml water, 600 g couscous
   B) 150 ml water, 250 g couscous
   C) 150 ml water, 125 g couscous

6. Which of these statements describes what you do to double an amount?

   A) add 2
   B) multiply by 2
   C) divide by 2

Ratio and proportion quiz

7. The scale on a map is 1 cm: 5 **km**. What distance does 3.5 **cm** represent?

   A) 15.5 km
   B) 17.5 cm
   C) 17.5 km

8. As a playgroup worker, if I increase the amount of apple juice I am serving at the playgroup from 25 cl to 100 cl, how much should I increase the the orange juice to, to keep the quantities in the same proportion? The orange juice is 50 cl to start with.

   A) 100 cl
   B) 500 cl
   C) 200 cl

9. Which of these statements describes what you do to treble an amount?

   A) Divide by 3
   B) Multiply by 30
   C) Multiply by 3

10. If a class has 10 girls and 15 boys what is the proportion of girls to boys?

   A) 3 girls to 2 boys
   B) 2 girls to 3 boys
   C) 5 girls to 6 boys

[Topic] quiz

Answers

Level A

1. 1m of ribbon is cut into 5 equal lengths. To work this out…..

    The correct answer is A. Divide 100 cm (1m) by 5 to get 5 equal lengths of 20 cm.

2. If 500 g of fruit are needed to make a fruit crumble for four people, then 250 g would be enough for just two people.

    The correct answer is: A. True. Two people is half of 4 people so to get the answer you divide 500 g by 2 which gives 250 g.

3. In a group of 10 diners in a restaurant, 5 are vegetarians. As a proportion of the whole group, half are vegetarians.

    The correct answer is: A. True. 5 out of 10 is the same as half.

4. A man earns £15 an hour as a gardener. How much is that per half-hour?

    The correct answer is: B. £7.50. To halve £15 you divide it by 2, which gives £7.50.

5. Divide £25 equally between 2 people:

    The correct answer is: C. £12.50. 25 ÷ 2 is 12½ which is £12.50 in currency.

6. Barleyade: Pour equal quantities of lemon barley and lemonade into a tumbler, add ice and a slice of lemon. How much lemon barley will you add to 50 cl of lemonade?.

    The correct answer is: B. 50 cl. The recipe says equal quantities.

[Topic] quiz

7. 2 people working together normally take ½ a day to fit a new boiler.

   It is likely to take longer if there is only one person on the job.

   The correct answer is: B. True. One person would take a whole day to do what two people do in half a day.

8. If you are scaling down this recipe for bread and only using 250g flour how much salt should you add?

   The correct answer is: A. 1 tsp

   You have halved the amount of flour from 500 g to 250 g so you should halve the salt as well from 2 teaspoons to 1.

9. A shopkeeper has increased her orders for The Times newspaper (from 20 copies to 60 copies) and The Guardian (from 25 copies to 75 copies). In what proportion has she increased her order?

   The correct answer is: A. She has increased her orders by 3.

   20 × 3 = 60 and 25 × 3 = 75

10. A student scores 7 out of 10 in a class test. What is the equivalent score out of 100?

   The correct answer is: B. 70

   7/10 is the same as 70 out of 100 (multiply both numerator and denominator by 10)

[Topic] quiz

Level B

1. Which of these currency exchange rates is equal to €150 for £100?

    The correct answer is: B. €1.50 for £1.00

    For every £, you will get €1.50

2. A cake recipe calls for 3 cups of flour and ½ teaspoon of baking powder. What proportions of flour to baking powder will I need to make half the quantity?

    The correct answer is: B. 1½ cups flour and ¼ tsp baking powder

    To make half the quantity divide the ingredient quantities by 2

3. A machine makes 12 articles in an hour. How many articles can it make in 6 hours?

    The correct answer is: A. 72

    12 articles per hour means that in 6 hours the machine will make 12 × 6 = 72 articles.

4. A machine makes 6 articles in an hour. How many hours does it take to make 48 articles?

    The correct answer is: C. 8 hours.

    48 ÷ 6 = 8

5. Which is the better value portion of cheese?

    The correct answer is: B. If 10 g costs 20p then 5 g would cost 10p. 10 g plus 5 g would cost 30p which is cheaper than 15 g for 36p.

[Topic] quiz

6. Which is the better value for apples?

    The correct answer is: A. 1 kg for £1.20

    If 1 kg costs £1.20 then half a kg would be worth 60p. That would be cheaper than 0.5 kg for 70p.

7. The exchange rate between £ and Euros, €, is €1.10 to £1. How many € will I get for £20?

    The correct answer is: A. €22. Multiply the € value by the same amount as the £ value. The pound is multiplied by 20.

    20 × €1.10 = €22.00

8. The exchange rate between £ and dollars, US$, is US$1.60 to £1. How many $ will I get for £20?

    The correct answer is: B. $32. Multiply the $ value by the same amount as the £ value. The pound is multiplied by 20.

    20 × $1.60 = $32.00

9. A map has a scale where 2 cm represents 1 km

    TRUE or FALSE - 5 cm represents 5 km.

    The correct answer is: B. False. A scale of 2 cm to 1 km is twice as many cm as km, so 5 cm represents 2.5 km.

10. A map has a scale where 3cm represents 1 km.

    TRUE or FALSE - 15 cm represents 5 km.

    The correct answer is: A. True. A scale of 3 cm to 1 km is three times as many cm as km, so 15 cm represents 5 km.

[Topic] quiz

Level C

1. Robin drove 90 miles in an hour and a half. At this rate, how many miles will he have driven in 4 hours?

    The correct answer is: C. 240 miles

    90 miles in 1.5 hours gives a rate of 60 miles per hour (90 divided by 1.5). In 4 hours he will have driven about 240 miles (60 multiplied by 4).

2. Declan ran 500 metres in 5 minutes. What is this as a rate per minute?

    The correct answer is: B. 100 metres per minute. To work out the rate, you divide 500 by 5. This gives you the distance run per minute.

    500 ÷ 5 = 100.

3. Sheila walks about 4½ miles every day. If she walks about 3 miles per hour, how long does her walk take?

    The correct answer is: C. 1.5 hours

    4½ miles @ 3 miles per hour will take 1 hour (3 miles) + ½ hour (1½ miles)

4. 5 hours to travel 360 miles is about _____mph

    The correct answer is: C. 70mph

    To get the rate, you divide 360 miles by 5 hours, which gives 72 mph.

5. Instructions on a packet of couscous say "Pour 300 ml of boiling hot water over 250 g of couscous and leave to stand for 5 minutes. Serves 4". What proportion of couscous and water is needed for 2 servings?

    The correct answer is: C. 150 ml water, 125 g couscous. 2 servings is half of 4, so divide both amounts by 2.

    250 g ÷ 2=125 g and 300 ml ÷ 2 = 150ml

[Topic] quiz

6.   Which of these statements describes what you do to double an amount?

The correct answer is: B. multiply by 2

7.   The scale on a map is 1 cm: 5 **km**. What distance does 3.5 **cm** represent?

The correct answer is: C. 17.5 km

3 cm represents 15 km (3 x 5) and 0.5 cm represents 2.5 km (5 ÷ 2) Add the 2 answers together to get 17.5 km.

8.   As a playgroup worker, if I increase the amount of apple juice I am serving at the playgroup from 25 cl to 100 cl, how much should I increase the orange juice by to keep the quantities in the same proportion? The orange juice is 50 cl to start with.

The correct answer is C. 200 cl. I have increased the apple juice four times to get from 25 cl to 100 cl. So if I increase the orange juice 4 times, that will be 50 cl ✕ 4 = 200 cl.

9.   Which of these statements describes what you do to treble an amount?

The correct answer is: C. Multiply by 3.

10. If a class has 10 girls and 15 boys what is the proportion of girls to boys?

The correct answer is: B. 2 girls to 3 boys

 10 girls to 15 boys can be simplified : 10/15 is the same as 2/3