



## Longer Maths Worksheet D

**You have 10 minutes to complete this section.**

1. Lily's stove uses 3.5 kilograms of coal every day to keep her house nice and warm. Lily has 87.5 kilograms of coal left, how long will her coal last?
2. Adam collects football stickers. He has 517 stickers in total. He starts sticking them in his album that has 19 pages. Each page in Adam's album holds 28 stamps. She fills up all of the pages except for the last page. How many stickers does Adam put on the last page?
3. Amelia has 150 rose bushes in her garden. 28% of them have red flowers and two thirds of them have yellow flowers. The rest have white flowers. How many of Amelia's roses have white flowers?
4. Maryam's recipe for chocolate brownies gives the ratio of sugar (tablespoons) to flour (tablespoons) to eggs as 3:7:2. If Maryam uses 36 tablespoons of sugar, how many eggs will she need?
5. Aaron has been sitting spelling tests at school every week since September. All the tests are out of forty. After 8 weeks his mean score is 29. In the ninth test he



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- scores 90%. What is Aaron's new mean score (rounded to the nearest whole number)?
6. Helena receives six emails for every fourteen that she sends. On Friday Helena received 51 emails. How many emails did Helena send on Friday?
  
  7. Fatima is the youngest in her family. Ali is twice her age and will be fifteen next year. Rhiya is eleven years older than Fatima. How old is Rhiya?
  
  8. Zainab thinks of a number, she adds five, then multiply that number by 7 the answer is 147. What was the first number Zainab thought of?
  
  9. There are three types of chocolate bar on the shelf in the shop: Kitkat, Apollos and Bixmix. The ratio of KitKat to Apollos and Bitmix is 2:1:3. If there are 18 packs of Bitmix on the shelf, how many chocolate bars are there is total?
  
  10. Zayan is painting the fence in his very large garden. He has used 7 tins of paint to complete 392 fence panels. How many panels does each tin of paint cover?



## Answers

- 1) Lily's stove uses 3.5 kilograms of coal every day to keep her house nice and warm. Lily has 87.5 kilograms of coal left, how long will her coal last?

$$87.5\text{kgs} \div 3.5\text{kgs per day} = \underline{25 \text{ days}}$$

- 2) Adam collects football stickers. He has 517 stickers in total. He starts sticking them in his album that has 19 pages. Each page in Adam's album holds 28 stickers. He fills up all the pages except for the last page. How many stickers does Adam put on the last page?

$$18 \text{ pages} \times 28 \text{ stickers} = 504 \text{ stickers used}$$
$$517 - 504 = \underline{13} \text{ stickers left for page 19.}$$

- 3) Amelia has 150 rose bushes in her garden. 28% of them have red flowers and two thirds of them have yellow flowers. The rest have white flowers. How many of Amelia's roses have white flowers?

$$10\% \text{ of } 150 \text{ roses} = 15 \text{ roses}$$
$$5\% \text{ of } 150 \text{ roses} = 7.5 \text{ roses}$$
$$1\% \text{ of } 150 \text{ roses} = 1.5 \text{ roses}$$
$$\text{So } 28\% = 24 \text{ red roses}$$

$$\frac{2}{3} \text{ of } 150 \text{ roses} = 100 \text{ yellow roses}$$

$$24 \text{ red} + 100 \text{ yellow} = 124 \text{ roses}$$
$$\text{White roses} = 150 \text{ roses} - 124 \text{ roses} = \underline{26 \text{ roses.}}$$

- 4) Maryam's recipe for chocolate brownies gives the ratio of sugar (tablespoons) to flour (tablespoons) to eggs as 3:7:2. If Maryam uses 36 tablespoons of sugar, how many eggs will she need?

Ratio Question	Sugar:Flour:eggs
	3 : 7 : 2
	36: 84 : <u>24</u>



- 5) Aaron has been sitting spelling tests at school every week since September. All the tests are out of forty. After 8 weeks his mean score is 29. In the ninth test he scores 90%. What is Aaron's new mean score (rounded to the nearest whole number)?

Total Score  $\div$  Number of tests = mean score

Total Score  $\div$  8 tests = 29

Total score = 29 x 8 tests = 232

Test nine 90% of 40 = 36

Total score after nine tests: 232 + 36 = 268

Total Score  $\div$  Number of tests = mean score

268  $\div$  9 = 29.77 = 30

- 6) Helena receives six emails for every fourteen that she sends. On Friday Helena received 51 emails. How many emails did Helena send on Friday?

Ratio Question

Received: Sent

6 : 14

51 : 119

- 7) Fatima is the youngest in her family. Ali is twice her age and will be fifteen next year. Rhiya is eleven years older than Fatima. How old is Rhiya?

Logic question:

Fatima- half Ali's age = 7

Ali- Must be 14 now (as 15 next year)

Rhiya: Fatima's age 7 + 11 = 18

- 8) Zainab thinks of a number, she adds five, then multiply that number by 7 the answer is 147. What was the first number Zainab thought of?

1<sup>st</sup> Step: write out words into mathematical equation.  $x = \text{Zainab's number}$

$(x + 5) \times 7 = 147$

Inverse operation:  $147 \div 7 - 5 = \underline{16}$



- 9) There are three types of chocolate bar on the shelf in the shop: Kitkat, Apollos and Bixmix. The ratio of KitKat to Apollos and Bitmix is 2:1:3. If there are 18 packs of Bitmix on the shelf, how many chocolate bars are there is total?

Ratio Question :                    K : A : B  
                                                  2 : 1 : 3  
                                                  12 : 6 : 18

x6                    ↻

Total chocolate:  $12 + 6 + 18 = \underline{36}$

- 10) Zayan is painting the fence in his very large garden. He has used 7 tins of paint to complete 392 fence panels. How many panels does each tin of paint cover?

$392 \text{ panels} \div 7 \text{ tins} = \underline{56} \text{ panels per tin}$