



Eleven Plus
Revision Books

Longer Maths and Data Worksheet N

1. At a school concert, the chairs were arranged in rows of 15. Each row contained 25 chairs and 45 were empty during the show. How many parents attended the concert?
2. A rectangle has an area of 75 cm^2 . The length of the longest sides are triple the lengths of the shortest sides. How long are the shortest sides?
3. A campsite is two thirds full when it has 258 tents pitched up. How many more tents can be pitched before it is completely full?
4. In school there are 380 children. 65% of the children have a school lunch on Fridays and the rest of the children bring a packed lunch. How many children take a packed lunch on Fridays?
5. Daisy's dad plans to cycle from Land's End to John O'Groats for charity. The total distance is 704 miles. He plans to average 54 miles per day. How many days will it take him to complete his trip?
6. Richard weighs 5kg more than Will, who in turn weighs 2kg more than James. Altogether, their combined weights are 135 kg. How many kg does Richard weigh?
7. What is the difference between the product of 24 and 7 and the square root of 225?
8. At a large restaurant 408 diners were served in six hours. How many people would be served in three and a half hours?



Answers

1. At a school concert, the chairs were arranged in rows of 15. Each row contained 25 chairs and 45 were empty during the show. How many parents attended the concert?

$$25 \text{ chairs} \times 15 \text{ rows} = 375 \text{ chairs total} - 45 \text{ empty} = \underline{\mathbf{330 \text{ parents}}}$$

2. A rectangle has an area of 75 cm^2 . The length of the longest sides are triple the lengths of the shortest sides. How long are the shortest sides?



Short side = x , long side = $3x$. x multiplied by $3x = 75 \text{ cm}^2$.

$$3x^2 = 75 \text{ cm}^2$$

$$x^2 = 25 \text{ cm}^2$$

$$\underline{\mathbf{x = 5 \text{ cm}}}$$

*****Trial and Error would also be a suitable method (but slow) to solve this question

3. A campsite is two thirds full when it has 258 tents pitched up. How many more tents can be pitched before it is completely full?

$$\frac{2}{3} = 258, \text{ so can fit } \frac{1}{3} \text{ more. } \frac{1}{3} = \underline{\mathbf{129 \text{ more tents}}}$$

4. In school there are 380 children. 65% of the children have a school lunch on Fridays and the rest of the children bring a packed lunch. How many children take a packed lunch on Fridays?

$$45\% \text{ of } 380 \text{ children bring packed lunch} = \underline{\mathbf{171 \text{ children}}}$$

$$(10\% = 38, 1\% = 3.8, \text{ so } 45\% = 171)$$

5. Daisy's dad plans to cycle from Land's End to John O'Groats for charity. The total distance is 704 miles. He plans to average 54 miles per day. How many days will it take him to complete his trip?

$$704 \text{ miles} \div 54 \text{ miles per day} = 13 \text{ remainder } 2, \text{ so } \underline{\mathbf{14 \text{ days}}}$$



6. Richard weighs 5kg more than Will, who in turn weighs 2kg more than James. Altogether, their combined weights are 135 kg. How many kg does Richard weigh?

James is lightest.

William +2kgs and

Richard + 7kgs=Total difference is 9kgs.

$135\text{kgs} - 9\text{kgs} = 126\text{kgs}$ (subtract difference from total)

$126\text{kgs} \div 3 \text{ boys} = 42\text{kgs}$ (share remainder between the 3 boys)

So

James = 42kgs

William = 42kgs + 2kgs = 44kgs

(add differences back on)

Richard = 42kgs + 7kgs = 49kgs

7. What is the difference between the product of 24 and 7 and the square root of 225?

$24 \times 7 = 168$, square root of 225 is 15. $168 - 15 = \underline{153}$

8. At a large restaurant 408 diners were served in six hours. How many people would be served in three and a half hours?

Ratio Question Diners : Hours

408 : 6 divide by 12

34 : 0.5 multiply by 7

238 : 3.5

= 238 diners