CREST Olympiads

#CRESTInnovator

CREST Mathematics Olympiad (CMO)

Worksheet for

Class 7

Topic

Fractions

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Worksheet on Fractions

1. **A rope of length 8 ⅗ metres is divided into five equal parts. What is the length of each part so obtained?**

   a. 1.12 metres
   b. 1.32 metres
   c. 1.52 metres
   d. 1.72 metres

2. **A car runs 54 ¼ km consuming 2 litres of petrol. How much distance will it take to consume 1 $\frac{2}{7}$ litre of petrol?**

   a. 34 $\frac{1}{8}$ km
   b. 34 $\frac{3}{8}$ km
   c. 34 $\frac{5}{8}$ km
   d. 34 $\frac{7}{8}$ km

3. **By how much does the sum of 37.786 and 29.576 exceed the sum of 38.789 and 23.548?**

   a. 5.015
   b. 5.025
   c. 5.105
   d. 5.125

4. **What number should be added to 13 $\frac{2}{3}$ to get 12 $\frac{5}{7}$?**

   a. $\frac{20}{21}$
   b. $\frac{22}{21}$
   c. $-\frac{20}{21}$
   d. $-\frac{22}{21}$

5. **When Katrina travelled 35 km by car, she found that (5/8)th of her journey was still left. What was the total distance of the whole journey?**

   a. 93 $\frac{1}{3}$ km
   b. 93 $\frac{2}{3}$ km
   c. 93 $\frac{1}{8}$ km
   d. 93 $\frac{3}{8}$ km

Answer Key

1. d - 1.72 metres

Explanation: Total length of rope = 8 ⅗ metres
A rope is divided into five equal parts.
Length of each part = 8 ⅗ metres ÷ 5
= 43/5 ÷ 5
= 43/5 × 1/5
= 43/25
= $1\ \frac{18}{25}$ metres
= $\left[1+\left(\frac{18}{25}\right)\right]$ metres
= $\left(1+\frac{18\times4}{25\times4}\right)$ metres [Mutiplied by 4 to get denominator 100, to find decimals.]
= $\left(1+\frac{72}{100}\right)$ metres
= (1 + 0.72) metres
= 1.72 metres

2. d - $34\ \frac{7}{8}$ km

Explanation: Distance covered by consuming 2 litres of petrol = 54 ¼ km = 217/4 km
Distance covered by consuming 1 litre of petrol = 217/4 km ÷ 2
= 217/8 km
Distance covered by consuming $1\frac{2}{7}$ litre of petrol = 217/8 km × $1\ \frac{2}{7}$ litre
= 217/8 km × 9/7
= 279/8 km
= $34\frac{7}{8}$ km

3. b - 5.025

Explanation: Sum of 37.786 and 29.576 = 67.362
Sum of 38.789 and 23.548 = 62.337
Difference (Exceed by) = 67.362 − 62.337 = 5.025

4. c - $-\frac{20}{21}$

Explanation: To find the number that should be added, subtract $13\ \frac{2}{3}$ from $12\ \frac{5}{7}$.
Required Number = $12\ \frac{5}{7} - 13\ \frac{2}{3}$
= $\frac{89}{7} - \frac{41}{3}$
= $\frac{267-287}{21}$ [LCM of 7 and 3 = 7 × 3 = 21]
= $\frac{-20}{21}$ or $-\frac{20}{21}$

5. a - $93\frac{1}{3}$ km

Explanation: Katrina travelled 35 km.
$(5/8)^{th}$ of her journey was still left.
Fraction of her journey travelled = $1 - \frac{5}{8}$
= $\frac{8-5}{8}$ [LCM of 1 and 8 is 8]
= $\frac{3}{8}$
$(3/8)^{th}$ of the total journey = Her journey travelled
⇒ $(3/8)^{th}$ of the total journey = 35
⇒ Total journey = $35 \times \frac{8}{3}$
⇒ Total journey = $\frac{280}{3}$
⇒ Total journey = $93\frac{1}{3}$ km

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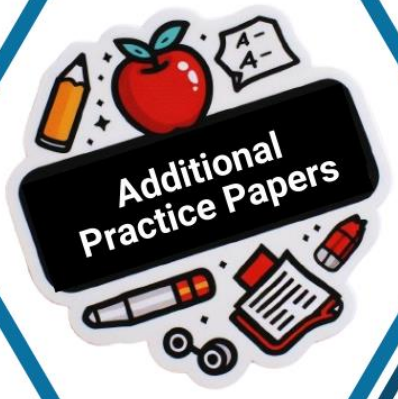

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