CREST

Olympiads

#CRESTInnovator

CREST Mathematics Olympiad (CMO)
Worksheet *for*

Class 5

Worksheet on Capacity

1. **This tank contains 7.8 hectolitres and 270 litres of water. Water consumption is 574 litres and 375 decilitres. What volume of water is left in the tank?**

7.8 hL and 270 l

   a. 418 litres 5 decilitres
   b. 418 litres 25 decilitres
   c. 438 litres 5 decilitres
   d. 438 litres 25 decilitres

2. **What is the total capacity of the given bottles in centilitres?**

7000 mL   5000 mL   1500 mL   1000 mL   500 mL   375 mL

   a. 15375 centilitres
   b. 1537.5 centilitres
   c. 153.75 centilitres
   d. 15.375 centilitres

3. **The capacity of Tank B is 13.5 gallons less than the capacity of Tank A. The capacity of Tank C is 23 gallons more than the capacity of Tank A. What is the capacity of Tank B in pints if the capacity of Tank C is 47 gallons?**

Tank A   Tank B   Tank C

a. 5 pints
b. 21 pints
c. 42 pints
d. 84 pints

4. **The amount of water in the small bucket is two-fifths times the capacity of the large bucket. What is the amount of water in a small bucket in quarts if the water in the large bucket is 2865 pints?**

a. 573 quarts
b. 859.5 quarts
c. 1146 quarts
d. 1432.5 quarts

5. **The water tank is empty initially. It is being filled from the top at a rate of 37 litres per hour, while simultaneously being drained from the bottom at a rate of 15 litres per hour. After 7 hours, how much water will be left in the tank?**

a. 77 litres
b. 115.5 litres
c. 154 litres
d. 192.5 litres

Answer Key

1. **c - 438 litres 5 decilitres**

   Explanation: Volume/Capacity of the tank = 7.8 hectolitres 270 litres

             = 7.8 hectolitres + 270 litres

             = 7.8 × 100 litres + 270 litres

             = 780 litres + 270 litres

             = 1050 litres

             = 1050 × 10 decilitres

             = 10500 decilitres

   Volume of water consumption = 574 litres 375 decilitres

             = 574 litres + 375 decilitres

             = 574 × 10 decilitres + 375 decilitres

             = 5740 decilitres + 375 decilitres

             = 6115 decilitres

   Volume of water left in the tank = (10500 − 6115) decilitres

             = 4385 decilitres

             = 4380 decilitres + 5 decilitres

             = (4380/10) litres + 5 decilitres

             = 438 litres + 5 decilitres

             = 438 litres 5 decilitres

2. **b - 1537.5 centilitres**

   Explanation: Total capacity of the given bottles in millilitres = 7000 + 5000 + 1500 + 1000 + 500 + 375

             = 15375 mL

   Total capacity of the given bottles in centilitres = 15375 mL ÷ 10

             = 1537.5 centilitres

3. **d - 84 pints**

   Explanation: Capacity of tank C = 47 gallons
   The Capacity of Tank C is 23 gallons more than the capacity of Tank A. Thus, the capacity of tank A is 23 gallons less than the capacity of tank C.
   Capacity of tank A = (Capacity of tank C − 23) gallons

          = (47 − 23) gallons

          = 24 gallons

   The capacity of Tank B is 13.5 gallons less than the capacity of Tank A.
   Capacity of tank B = (Capacity of tank A − 13.5) gallons

          = (24 − 13.5) gallons

          = 10.5 gallons

   Capacity of tank B in pints = 10.5 gallons × 8

          = 84 pints

4. a - 573 quarts

Explanation: Amount of water in the large bucket = capacity of the large bucket
= 2865 pints

The amount of water in the small bucket is two-fifths of the capacity of the large bucket.
Amount of water in the small bucket = 2/5 × Capacity of the large bucket
= 2/5 × 2865 pints
= 1146 pints

Amount of water in the small bucket in quarts = 1146 pints ÷ 2 (since 1 quart = 2 pints)
= 573 quarts

5. c - 154 litres

Explanation: Amount of water filled in a tank in one hour = 37 L
Amount of water drained from a tank in one hour = 15 L
Net amount of water added in an hour in the tank = 37 − 15 = 22 L
Amount of water filled in 7 hours in the tank = 22 × 7
= 154 L
The amount of water left in the tank after 7 hours is 154 litres.

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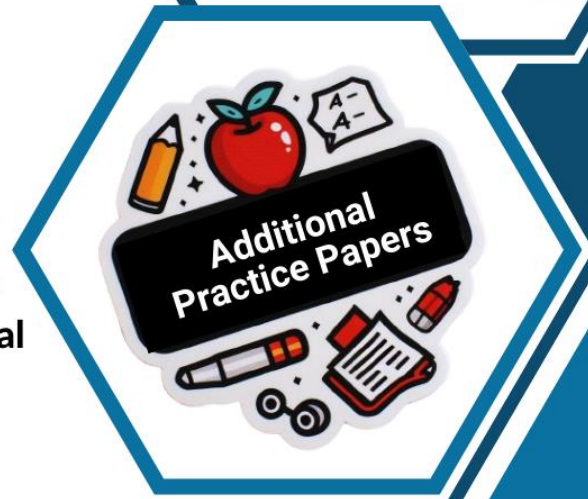2. Go to Dashboard -> Additional Practice -> Buy

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