1: Maria's Orange Purchase

Maria bought 8 kg of oranges. She used 1/2 of them for fresh juice and gave 0.75 kg to her neighbor.

(a) What fraction of oranges did she use for the juice?

(b) How many kilograms of oranges did she give to her neighbor (as a fraction of the total)?

(c) How many kilograms of oranges did she use in total (for juice and neighbor)?

(d) How many kilograms of oranges are left with Maria?

2: David's Milk Supply

David bought 3 liters of milk. He used 1/5 of it for his cereal and spilled 0.2 liters while pouring.

(a) What fraction of milk did he use for his cereal?

(b) How many liters of milk did he spill (as a fraction of the total)?

(c) How many liters of milk did he use/lose in total (for cereal and spillage)?

(d) How many liters of milk are left with David?

3: Sarah's Fabric Project

Sarah purchased 10 meters of fabric. She used 1/8 of it for a cushion cover and cut off 1.5 meters for a small bag.

(a) What fraction of fabric did she use for the cushion cover?

(b) How many meters of fabric did she cut for the small bag (as a fraction of the total)?

(c) How many meters of fabric did she use in total (for cushion cover and bag)?

(d) How many meters of fabric are left with Sarah?

SOLUTIONS

Calculation:

Amount given to neighbor = 0.75 kg

Total oranges = 8 kg

Fraction = (0.75 kg)/(8 kg)=75/800

Simplify the fraction: Divide both numerator and denominator by 25.

75÷25=3

800÷25=32

Solution: Maria gave 3/32 of the oranges to her neighbor.

(c) How many kilograms of oranges did she use in total (for juice and neighbor)?

Calculation:

Oranges used for juice (in kg): (1/2)×8 kg=4 kg

Total used = Oranges for juice + Oranges for neighbor

Total used = 4 kg+0.75 kg=4.75 kg

Solution: Maria used 4.75 kg of oranges in total.

(d) How many kilograms of oranges are left with Maria?

Calculation:

Oranges left = Total oranges - Total used

Oranges left = 8 kg−4.75 kg=3.25 kg

Solution: Maria has 3.25 kg of oranges left.

Solution Question 2: David's Milk Supply

David bought 3 liters of milk. He used 1/5 of it for his cereal and spilled 0.2 liters while pouring.

(a) What fraction of milk did he use for his cereal?

Solution: David used 1/5 of the milk for his cereal. (This is directly stated in the problem).

(b) How many liters of milk did he spill (as a fraction of the total)?

Calculation:

Amount spilled = 0.2 liters

Total milk = 3 liters

Fraction = (0.2 liters)/(3 liters)=(2/10)/3=2/(10×3)=2/30

Simplify the fraction: Divide both numerator and denominator by 2.

2÷2=1

30÷2=15

Solution: David spilled 1/15 of the total milk.

(c) How many liters of milk did he use/lose in total (for cereal and spillage)?

Calculation:

Milk used for cereal (in liters): (1/5)×3 liters=3/5 liters=0.6 liters

Total used/lost = Milk for cereal + Milk spilled

Total used/lost = 0.6 liters+0.2 liters=0.8 liters

Solution: David used/lost 0.8 liters of milk in total.

(d) How many liters of milk are left with David?

Calculation:

Milk left = Total milk - Total used/lost

Milk left = 3 liters−0.8 liters=2.2 liters

Solution: David has 2.2 liters of milk left.

Solution Question 3: Sarah's Fabric Project

Sarah purchased 10 meters of fabric. She used 1/8 of it for a cushion cover and cut off 1.5 meters for a small bag.

(a) What fraction of fabric did she use for the cushion cover?

Solution: Sarah used 1/8 of the fabric for the cushion cover. (This is directly stated in the problem).

(b) How many meters of fabric did she cut for the small bag (as a fraction of the total)?

Calculation:

Amount for bag = 1.5 meters

Total fabric = 10 meters

Fraction = (1.5 meters)/(10 meters)=15/100

Simplify the fraction: Divide both numerator and denominator by 5.

15÷5=3

100÷5=20

Solution: Sarah used 3/20 of the total fabric for the small bag.

(c) How many meters of fabric did she use in total (for cushion cover and bag)?

Calculation:

Fabric for cushion cover (in meters): (1/8)×10 meters=10/8 meters=1.25 meters

Total used = Fabric for cushion cover + Fabric for bag

Total used = 1.25 meters+1.5 meters=2.75 meters

Solution: Sarah used 2.75 meters of fabric in total.

(d) How many meters of fabric are left with Sarah?

Calculation:

Fabric left = Total fabric - Total used

Fabric left = 10 meters−2.75 meters=7.25 meters

Solution: Sarah has 7.25 meters of fabric left.