



### Playing with Numbers Ex 2.8 Q9

**Answer :**

To find the required number of pencils and crayons, we need to find the LCM of 24 and 32.

Prime factorisation of 24 =  $2 \times 2 \times 2 \times 3$

Prime factorisation of 32 =  $2 \times 2 \times 2 \times 2 \times 2$

$\therefore$  Required LCM of 24 and 32 =  $2 \times 2 \times 2 \times 2 \times 2 \times 3 = 96$

Thus, number of pencils and crayons needed to be bought is 96 each, i.e.  $96 \div 24 = 4$  packs of colour pencils and  $96 \div 32 = 3$  packs of crayons.

### Playing with Numbers Ex 2.8 Q10

**Answer :**

(i) For reducing the given fraction to the lowest terms, we have to divide its numerator and denominator by their HCF.

Now, we have to find the HCF of 161 and 207.

Prime factorisation of 161 =  $7 \times 23$

Prime factorisation of 207 =  $3 \times 3 \times 23$

$\therefore$  HCF of 161 and 207 = 23

Now,  $\frac{161 \div 23}{207 \div 23} = \frac{7}{9}$

Hence,  $\frac{7}{9}$  is the required fraction.

(ii) For reducing the given fraction to the lowest terms, we have to divide its numerator and denominator by their HCF.

Now, we have to find the HCF of 296 and 481.

Prime factorisation of 296 =  $2 \times 2 \times 2 \times 37$

Prime factorisation of 481 =  $13 \times 37$

$\therefore$  HCF of 296 and 481 = 37

Now,  $\frac{296 \div 37}{481 \div 37} = \frac{8}{13}$

Hence,  $\frac{8}{13}$  is the required fraction.

### Playing with Numbers Ex 2.8 Q11

**Answer :**

The maximum capacity of the required tin is the HCF of the three quantities of oil.

Prime factorisation of 120 =  $2 \times 2 \times 2 \times 3 \times 5$

Prime factorisation of 180 =  $2 \times 2 \times 3 \times 3 \times 5$

Prime factorisation of 240 =  $2 \times 2 \times 2 \times 2 \times 3 \times 5$

$\therefore$  HCF of 120, 180, and 240 =  $2 \times 2 \times 3 \times 5 = 60$

Hence, the required greatest capacity of the tin must be 60 litres.

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