Class: 4
Subject : Mathematics
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Revision sheet solution

Multiples and Factors

1. Answer:
   a) H.C.F b) L.C.M c) Prime. d) Prime e) Composite f) divisor
2. Answer:
   a) True. b) False. c) True. d) True. e) False. f) True.
3. Answer:
   a) Ans: Highest Common Factor.
   b) Ans: Least Common Multiple.
   c) Ans: Numbers which are neither 1 nor prime numbers are called composite number.
   d) Ans: A number which has 2 factors, 1 and the number itself, is called prime number.
   e) Ans: 2, 3, 5, 7, 11, 13, 17, 19,23, 29,31,37,41, 43, 47, 53, 59, 61, 67, 71,73,79, 83, 89,97.
   f) Ans: Numbers which divide a number without a remainder are called factors.
4. Answer:
   (i) Answer: The multiples of 3 are:
   3×1=3, 3×2=6, 3×3=9, 3×4=12, 3×5=15, 3×6=18, 3×7=21, 3×8=24, 3×9=27, 3×10=30, 3×11=33, 3×12=36 ……..
   The multiples of 3 :3,6,9,12,15,18,21,24,27,30,33,36 and so on.
   Answer: The multiples of 3 are 3,6,9,12,15,18,21,24,27,30,33,36 and so on.
   (ii) Answer: The multiples of 4 are:
   4×1=4, 4×2=8, 4×3=12, 4×4=16, 4×5=20, 4×6=24, 4×7=28, 4×8=32, 4×9=36, 4×10=40, 4×11=44, 4×12=48 ……..
   The multiples of 4 :4,8,12,16,20,24,28,32,36,40,44,48 and so on.
   Answer: The multiples of 4 are 4,8,12,16,20,24,28,32,36,40,44,48 and so on.
   (iii) Answer: The multiples of 7 are:
   7×1=7, 7×2=14, 7×3=21, 7×4=28, 7×5=35, 7×6=42, 7×7=49, 7×8=56, 7×9=63, 7×10=70, 7×11=77……..
   The multiples of 7 :7,14,21,28,35,42,49,56,63,70,77 and so on.
   Answer: The multiples of 7 are 7,14,21,28,35,42,49,56,63,70,77 and so on.
   (iv) Answer: The multiples of 10 are:
   10×1=10, 10×2=20, 10×3=30, 10×4=40, 10×5=50, 10×6=60, 10×7=70, 10×8=80, 10×9=90, 10×10=100, 10×11=110……..
   The multiples of 10 :10,20,30,40,50,60,70,80,90,100,110 and so on.
   Answer: The multiples of 10 are10,20,30,40,50,60,70,80,90,100,110 and so on.

5. Answer:

(i) Answer: The multiples of 3 are:

3×1=3, 3×2=6, 3×3=9, 3×4=12, 3×5=15, 3×6=18, 3×7=21, 3×8=24, 3×9=27, 3×10=30, 3×11=33, 3×12=36 ……..

The multiples of 3 :3,6,9,12,15,18,21,24,27,30,33,36 and so on.

The multiples of 6 are:

6×1=6, 6×2=12, 6×3=18, 6×4=24, 6×5=30, 6×6=36, 6×7=42……..

The multiples of 6 :6,12,18,24,30,36 ,42and so on.

Answer: The common multiples are 6,12,18,24,30 and 36.

(ii) Answer: The multiples of 2 are:

2×1=2, 2×2=4, 2×3=6, 2×4=8, 2×5=10, 2×6=12, 2×7=14, 2×8=16, 2×9=18, 2×10=20, 2×11=22, 2×12=24 ,……..

The multiples of 3 :2,4,6,8,10,12,14,16,18,20,22,24, and so on.

The multiples of 4 are:

4×1=4, 4×2=8, 4×3=12, 4×4=16, 4×5=20, 4×6=24, 4×7=28, 4×8=32, 4×9=36, 4×10=40, 4×11=44, 4×12=48 ……..

The multiples of 4 :4,8,12,16,20,24,28,32,36,40,44,48 and so on.

Answer: The common multiples are 4,8,12,16,20,24.

(iii) Answer: The multiples of 6 are:

6×1=6, 6×2=12, 6×3=18, 6×4=24, 6×5=30, 6×6=36, 6×7=42, 6×8=48,……..

The multiples of 6 :6,12,18,24,30,36 ,42,48and so on.

The multiples of 8 are:

8×1=8, 8×2=16, 8×3=24, 8×4=32, 8×5=40, 8×6=48, 8×7=56……..

The multiples of 8 :8,16,24,32,40,48,56and so on.

Answer: The common multiples are 24,48 and so on.

6. Answer:

(i) Answer: The multiples of 4 are:

4×1=4, 4×2=8, 4×3=12, 4×4=16, 4×5=20, 4×6=24……

The multiples of 4 :4,8,12,16,20,24 and so on.

The multiples of 5 are:

5×1=5, 5×2=10, 5×3=15, 5×4=20, 5×5=25, 5×6=30……

The multiples of 5 :5,10,15,20,25 and so on.

Answer: The L.C.M. is 20.

(ii) Answer: The multiples of 4 are:

4×1=4, 4×2=8, 4×3=12, 4×4=16, 4×5=20, 4×6=24 , 4×7=28, 4×8=32, 4×9=36 ……

The multiples of 4 :4,8,12,16,20,24,28,32,36 and so on.

The multiples of 6 are:

6×1=6, 6×2=12, 6×3=18, 6×4=24, 6×5=30, 6×6=36, 6×7=42, 6×8=48,……..

The multiples of 6 :6,12,18,24,30,36 ,42,48and so on.

The multiples of 9 are:

9×1=9, 9×2=18, 9×3=27, 9×4=36, 9×5=45, 9×6=54……..

The multiples of 9 :9,18,27,36 ,45,54and so on.

Answer: The L.C.M. is 36.

(iii) Answer: The multiples of 4 are:

4×1=4, 4×2=8, 4×3=12, 4×4=16, 4×5=20, 4×6=24 , 4×7=28, 4×8=32, 4×9=36, 4×10=40, 4×11=44, 4×12=48, 4×13=52,4×14=56, 4×15=60…

The multiples of 4 :4,8,12,16,20,24,28,32,36,40,44,48,52,56,60 and so on.

The multiples of 5 are:

5×1=5, 5×2=10, 5×3=15, 5×4=20, 5×5=25, 5×6=30, 5×7=35, 5×8=40, 5×9=45, 5×10=50, 5×11=55, 5×12=60……,

The multiples of 5 :5,10,15,20,25,30,35,40,45,50,55,60 and so on.

The multiples of 6 are:

6×1=6, 6×2=12, 6×3=18, 6×4=24, 6×5=30, 6×6=36, 6×7=42, 6×8=48, 6×9=54, 6×10=60……..

The multiples of 6 :6,12,18,24,30,36 ,42,48,54,60and so on.

Answer: The L.C.M. is 60.

7. Answer:

(i) Answer: The factors of 4:

4÷1=4, 4÷2=2, 4÷4=1

The factors of 4: 1,2,4.

The factors of 5:

5÷1=5, 5÷5=1

The factors of 4: 1,5.

Answer: The common factor is 1.

(ii) Answer: The factors of 14:

14÷1=14, 14÷2=7, 14÷14=1

The factors of 4: 1,7,14.

The factors of 21:

21÷1=21, 21÷3=7,21÷7=3,21÷21=1

The factors of 4: 1,3,7,21.

Answer: The common factor is 1and 7.

8. Answer:

(i) Answer: The factors of 8:

8÷1=8, 8÷2=4, 8÷4=2, 8÷8=1

The factors of 4: 1,7,14.

The factors of 8: 1,2,4,8.
The factors of 16:
16÷1=16, 16÷2=8, 16÷4=4, 16÷8=2,16÷16=1
The factors of 16: 1,2,4,8,16.
The factors of 20:
20÷1=20, 20÷2=10, 20÷4=5, 20÷5=4,20÷10=2, 20÷20=1
The factors of 20: 1,2,4,5,10,20.
The common factors are: 1,2,4 and H.C.F.=4
Answer: 4.

(iii) Answer: The factors of 15:
15÷1=15, 15÷3=5, 15÷5=3, 15÷15=1
The factors of 15: 1,3,5,15.
The factors of 18:
18÷1=18, 18÷2=9, 18÷3=6, 18÷6=3,18÷18=1
The factors of 18: 1,2,3,6,18.
The factors of 20:
20÷1=20, 20÷2=10, 20÷4=5, 20÷5=4,20÷10=2, 20÷20=1
The factors of 20: 1,2,4,5,10,20.
H.C.F.=1
Answer: 1.

9. Answer:

(i) Answer: 8= 2×2×2.
(ii) Answer:15=3×5
(iii) Answer:9=3×3
(iv) Answer:18=2×3×3

10. **Word problem:**

1. Answer: we can find out time by finding LCM of 9 and 12
Multiples of 9: 9,18,27,36,45…..
Multiples of 12: 12,24,36,48,60…..
Therefore, LCM is 36.
So, after 36 minutes the alarms will ring together again.
Therefore, the next time alarms will ring together at (3.20+0.36) pm
=3.56 pm.
Answer: 3.56pm.

2. Answer: Length of the side of the shortest square can be found by finding LCM of 14 and 10.
Multiples of 14: 14,28,42,56,70,84,98,112…..
Multiples of 10: 10,20,30,40,50,60,70,80…..

Therefore, LCM is 70.

So, the length of the side of the shortest square is 70 cm.

Answer: 7o cm.

3. Answer: We keep piling up both the cookies boxes and chocolate boxes by finding LCM of 3 and 4.

   The multiples of 3 :3,6,9,12,15,18,21,24,27,30,33,36 and so on.

   The multiples of 4 :4,8,12,16,20,24 ,36and so on.

   Therefore, common multiples are, 12 ,24 and 36.

   So, the height becomes equal when both the cookies boxes and chocolate boxes are 12 cm,24 cm and 36 cm.

   Answer: 12 cm, 24 cm and 36cm.

4. Answer: Piku wants to distribute mangoes and lemons equally by finding LCM of 45 and 18.

   The factors of 45 :1,3,5,9, 15,45 and so on.

   The factors of 18 :1,2,3,6,9,18 so on.

   Therefore, common factors are1 ,3 and 9.

   So, HCF= 9.

   The number of children=9

   Mangoes will get = (45÷9) =5

   Lemons will get = (18÷9)=2

   Answer: 9 children, 5 mangoes and 2 lemons.