Name _____ Date _____

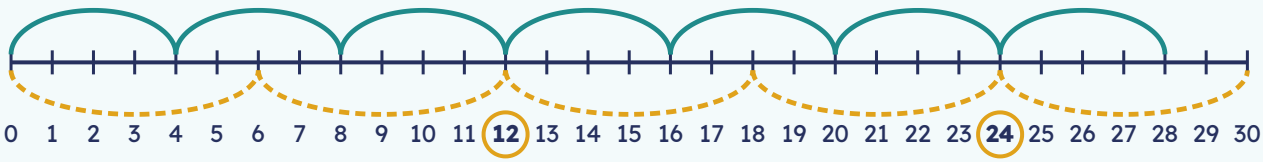
# Multiple hops

Multiples are the numbers in a times table. They go on for ever.

## 1 Learn



A **multiple** of 4 is in the 4 times table: 4, 8, 12, 16… and on for ever. A **common multiple** is in **both** times tables.




**Hops of 4** (above) and **hops of 6** (below) both land on **12** and **24**.
So 12 and 24 are common multiples of 4 and 6.

**Example: find the lowest common multiple of 6 and 8**

Multiples of 6: 6, 12, 18, **24**, 30, 36…
Multiples of 8: 8, 16, **24**, 32, 40…

The first number in **both** lists is 24, so the **lowest common multiple** of 6 and 8 is **24**.

**Flip's tip:** a common multiple must be in **both** times tables. 18 is a multiple of 6, but 18 ÷ 4 leaves a remainder, so 18 is **not** a common multiple of 4 and 6.

**Warm up:** write the first six multiples.

**Multiples of 7:** ☐, ☐, ☐, ☐, ☐, ☐

**Multiples of 9:** ☐, ☐, ☐, ☐, ☐, ☐

**Grown-ups:** say the times table aloud together as your child writes. Ask: "Is 42 a multiple of 7? How do you know?"

Name _____ Date _____

## 2 Try it together a child and a grown-up, about 10 minutes




### Clap and stamp

**You need:** just your hands, your feet and a pencil.

1. Count aloud together, slowly, from 1 to 40.
2. The child **claps** on every multiple of **4**. The grown-up **stamps** on every multiple of **6**.
3. Listen for numbers with a clap **and** a stamp. Write them down. Which one came first?
4. Now clap on multiples of **3** and stamp on multiples of **5**. Count to 40 again. Then pick your own pair.

| Clap on | Stamp on | Clap and stamp together | First one (LCM) |
|---|---|---|---|
| 4 | 6 | | |
| 3 | 5 | | |
| | | | |

**Grown-ups:** before each round, ask your child to predict the first clap-and-stamp number. Afterwards, ask: "Would they meet again if we kept counting?" (Yes: common multiples go on for ever.)

## 3 Practise

**A.** Draw a ring round every **multiple of 6**.

3 12 16 24 30 33 42 46 54 60

**B.** Fill the gaps.

**Multiples of 8:** 8, 16, ____, 32, ____, ____, 56

**Multiples of 9:** 9, ____, 27, ____, 45, ____, 63

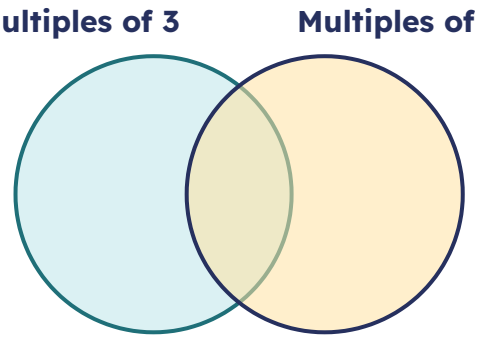
**Multiples of 25:** 25, 50, ____, 100, ____, 150

# Multiple hops



Name _____ Date _____

**C.** Write each number in the right part of the diagram. If it is in **neither** times table, write it outside the circles.




**6** **8** **10** **12** **15**
**16** **20** **21** **24**

The numbers in the middle are **common multiples** of 3 and 4.

**D.** Find the **lowest common multiple** of each pair.

| **3** and **5** | **4** and **10** | **6** and **9** | **2** and **7** |
|---|---|---|---|
| | | | |

**E.** A red bus leaves the bus station every **6 minutes**. A blue bus leaves every **8 minutes**. They both leave at **9:00**. When will they next leave together?

They leave together at _____

## Challenge

Sam says, "18 is a common multiple of 4 and 6, because 18 is in the 6 times table." Is he right? Explain how you know.

## I can... Tick when you can.

- [ ] list the multiples of a number
- [ ] find common multiples of two numbers
- [ ] find the lowest common multiple