Activity 3

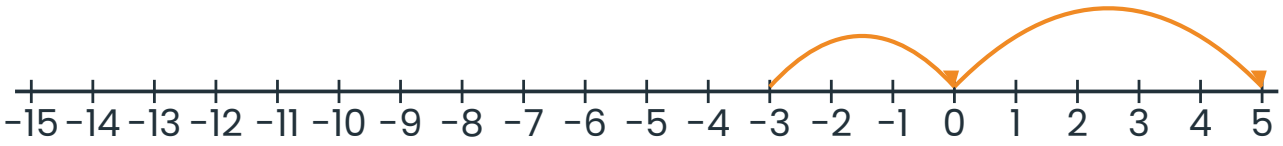
# Below zero

Use negative numbers for temperatures

Tenzin's cousin lives in a mountain village in Ladakh. In this fictional winter week, every morning was below 0 °C. A temperature below zero has a minus sign: −8 °C means 8 degrees below zero.



| Morning | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|
| Temperature (°C) | −6 | −9 | −4 | −12 | −7 | −1 | −3 |




**Worked example** From −3 °C to 5 °C: count up 3 to reach 0, then 5 more. The rise is 3 + 5 = 8 degrees. As a calculation: 5 − (−3) = 8.

1. (a) Which morning was coldest? Which was warmest? (b) Write the seven temperatures in order, from coldest to warmest.

2. (a) How many degrees warmer was Saturday morning than Thursday morning? (b) On Wednesday it rose by 9 degrees from morning to afternoon. What was the afternoon temperature? (c) Monday night was 8 degrees colder than Monday morning. What was the temperature?

3. Challenge: find the mean morning temperature (total ÷ 7).

Working

**Grown-up tip** Turn the number line upright like a thermometer: up is warmer, down is colder.

# Answers for grown-ups

Below zero. Check together and praise good thinking. Open answers say what to look for.

1. (a) Thu (-12 °C); Sat (-1 °C) (b) -12, -9, -7, -6, -4, -3, -1
2. (a) 11 degrees (b) 5 °C (c) -14 °C
3. -42 ÷ 7 = -6 °C

## Where this page comes from

This activity is page 8 of Real-World Challenges (ages 11–14), a printed Tiny Tots Play workbook.

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