## An Amazing Fact a Day

## Negative Numbers and Temperature

## Amazing Fact

The warmest temperature ever recorded at the South Pole was a freezing $-12.3^{\circ} \mathrm{C}$ in December 2011, making it one of the coldest places on Earth.

## Challenge

Complete the activities using negative numbers in a temperature context.

1. Put these temperatures in order, the coldest first.
a. $2{ }^{\circ} \mathrm{C},-8{ }^{\circ} \mathrm{C},-1{ }^{\circ} \mathrm{C},-6{ }^{\circ} \mathrm{C},-4^{\circ} \mathrm{C}$
b. $6{ }^{\circ} \mathrm{C}, 10^{\circ} \mathrm{C},-15^{\circ} \mathrm{C},-11^{\circ} \mathrm{C}, 14^{\circ} \mathrm{C}$
c. $16^{\circ} \mathrm{C}, 18{ }^{\circ} \mathrm{C},-23^{\circ} \mathrm{C},-25^{\circ} \mathrm{C},-13^{\circ} \mathrm{C}, 12^{\circ} \mathrm{C}, 20^{\circ} \mathrm{C}$
2. Which of these temperatures is lowest?
a. $-4^{\circ} \mathrm{C}$ or $-2^{\circ} \mathrm{C}$
b. $-8^{\circ} \mathrm{C}$ or $8^{\circ} \mathrm{C}$
$\qquad$
c. $-16^{\circ} \mathrm{C}$ or $-17^{\circ} \mathrm{C}$
d. $-5^{\circ} \mathrm{C}$ or $-6^{\circ} \mathrm{C}$

3. Answer the questions below:
a. The temperature rises by 15 degrees from $-4^{\circ} \mathrm{C}$. What is the new temperature?
b. The temperature falls from $11^{\circ} \mathrm{C}$ to $-2^{\circ} \mathrm{C}$. How many degrees does the temperature fall?
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c. The temperature is $6^{\circ} \mathrm{C}$. It falls by 8 degrees. What is the temperature now?
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d. The temperature is $-3^{\circ} \mathrm{C}$. How much must it rise to reach $5^{\circ} \mathrm{C}$ ?
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e. What is the difference in temperature between $-4^{\circ} \mathrm{C}$ and $14^{\circ} \mathrm{C}$ ?
f. The temperature was $-5^{\circ} \mathrm{C}$. It falls by 6 degrees. What is the temperature now?
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g. The temperature is $-11^{\circ} \mathrm{C}$. It rises by 2 degrees. What is the temperature now?
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h. The temperature is $-20^{\circ} \mathrm{C}$. How much must it rise to reach $-5^{\circ} \mathrm{C}$ ?
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You could also try to find out:

- which places, if any, are colder;
- how scientists based at the South Pole survive the cold;
- when, and for how long, the South Pole gets sunshine;
- where the hottest place on Earth is.


