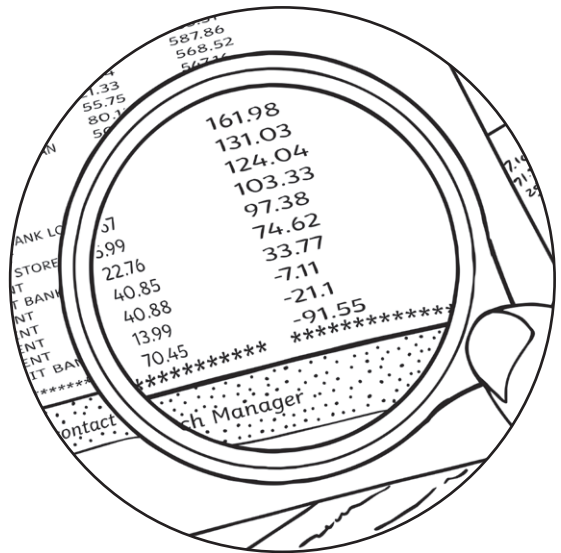


Negative Numbers

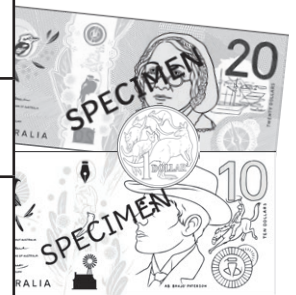
1. Complete these calculations.

- b. What is 7 less than -2? _____
- c. $-5 + 11 =$ _____
- d. What is 12 taken from 5 = _____
- e. Add 8 to -9 = _____
- f. $-10 + 14 =$ _____



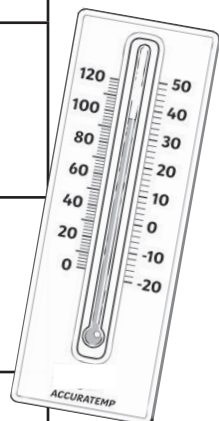
2. Solve these money problems.

I have a \$17 balance in my bank account. I put \$15 into my account. What is my new balance?	
My bank account has \$35 in it. I spend \$49. What is my new bank account balance?	
I spend \$35 on a new bike. The balance in my new bank account is now -\$18. How much money did I have in my account before I bought the bike?	



3. This table shows how the temperature changed on four different streets around the world. Complete the table to show how the temperatures changed over three months.

Town	January	Temperature change	February	Temperature change	March
Twinkl Town	-5°C	$+8^{\circ}\text{C}$	____ $^{\circ}\text{C}$	$+7^{\circ}\text{C}$	____ $^{\circ}\text{C}$
Education Avenue	-1°C	____ $^{\circ}\text{C}$	-9°C	____ $^{\circ}\text{C}$	1°C
Learning Lane	-11.3°C	____ $^{\circ}\text{C}$	-17.3°C	____ $^{\circ}\text{C}$	-5°C



4. Oliver has found the minimum and maximum average temperatures for four countries around the world. He has calculated the temperature range for each country. Can you identify his mistakes and correct them?

Country	Average Minimum Temperature	Average Maximum Temperature	Average Temperature range
Finland	-20°C	19°C	29°C _____
Japan	-2°C	26°C	28°C _____
Russia	-30.6°C	16.9°C	46.5°C _____
UK	-1.5°C	17.3°C	18.2°C _____


Using the table, explain whether the following statements are true or false.


- a) No country has an average temperature range less than 25°C _____
- b) If you order the countries by their average minimum temperature, from coldest to warmest, they would be: Russia, Finland, UK and Japan. _____
- c) The difference in temperature between the coldest average minimum temperature and the hottest average maximum temperature is less than 60°C. _____



Look at the information in the table and make your own true or false statement for a partner. Can they identify whether your statement is true or false?

5. Jai measured the morning temperature of the school playground for one week. On day one, the temperature was -6.5°C. On day two, the temperature increased by 5.7°C. On day three, it dropped by 5.3°C. On day four, it increased by 6.9°C and on day five, it dropped by 1.8°C.

What was the temperature by the end of day 5? _____

6.  = A positive or negative number

 = A positive or negative number

Investigate finding the possible values of  and  if:

$$\img alt="A circle with a vertical line through its center, representing a coin." data-bbox="134 242 211 299"/> + \img alt="A soccer ball with a pentagonal pattern, representing a ball." data-bbox="293 242 370 299"/> = 15$$

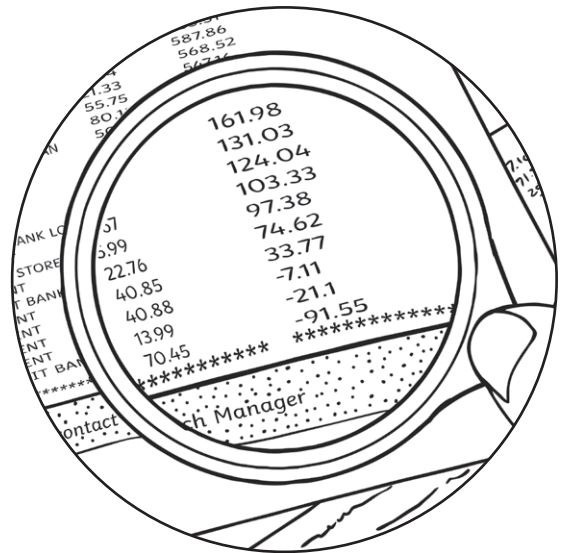
Can you use any decimal numbers to make 15?

Is it possible to have two positive or two negative numbers to complete the calculation?

Negative Numbers Answers

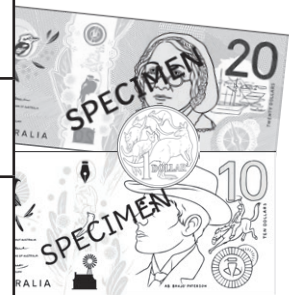
1. Complete these calculations.

- b. What is 7 less than -2? **-9**
- c. $-5 + 11 = \mathbf{6}$
- d. What is 12 taken from 5 = **-7**
- e. Add 8 to -9 = **-1**
- f. $-10 + 14 = \mathbf{4}$



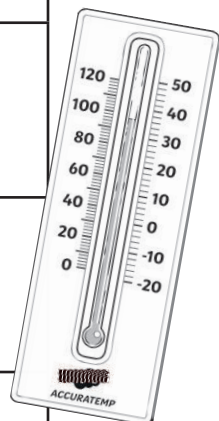
2. Solve these money problems.

I have a \$17 balance in my bank account. I put \$15 into my account. What is my new balance?	-\$2
My bank account has \$35 in it. I spend \$49. What is my new bank account balance?	-\$14
I spend \$35 on a new bike. The balance in my new bank account is now -\$18. How much money did I have in my account before I bought the bike?	-\$17



3. This table shows how the temperature changed on four different streets around the world. Complete the table to show how the temperatures changed over three months.

Town	January	Temperature change	February	Temperature change	March
Twinkl Town	-5°C	+8°C	3°C	+7°C	10°C
Education Avenue	-1°C	-8°C	-9°C	10°C	1°C
Learning Lane	-11.3°C	-6°C	-17.3°C	12.3°C	-5°C



4. Oliver has found the minimum and maximum average temperatures for four countries around the world. He has calculated the temperature range for each country. Can you identify his mistakes and correct them?

Country	Average Minimum Temperature	Average Maximum Temperature	Average Temperature range
Finland	-20°C	19°C	29°C 39°C
Japan	-2°C	26°C	28°C Correct
Russia	-30.6°C	16.9°C	46.5°C 47.5°C
UK	-1.5°C	17.3°C	18.2°C 18.8°C

Using the table, explain whether the following statements are true or false.


- a) No country has an average temperature range less than **25°C** **False**.
The UK has an average temperature range of 18.8°C.
- b) If you order the countries by their average minimum temperature, from coldest to warmest, they would be: Russia, Finland, UK and Japan.
False. Japan has an average minimum temperature of -2°C and the UK has an average minimum temperature of -1.5°C. Therefore, the UK's temperature is warmer than Japan's and should be ordered after it. The correct order should be: Russia, Finland, Japan, UK
- c) The difference in temperature between the coldest average minimum temperature and the hottest average maximum temperature is less than 60°C. **True. The difference between -30.6°C and 26°C is 56.6°C.**



5. Jai measured the morning temperature of the school playground for one week. On day one, the temperature was -6.5°C. On day two, the temperature increased by 5.7°C. On day three, it dropped by 5.3°C. On day four, it increased by 6.9°C and on day five, it dropped by 1.8°C.

What was the temperature by the end of day 5? **-1°C**

6. Accept any correct number sentences, such as:

 = -10 and  = 25 so $-10 + 25 = 15$

 = -100 and  = 115 so $-100 + 115 = 15$

 = -6.25 and  = 21.25 so $-6.25 + 21.25 = 15$

Accept any answer that identifies that two positive numbers could be added to make 15 but two negative numbers could not be added to make 15.