

# Integers

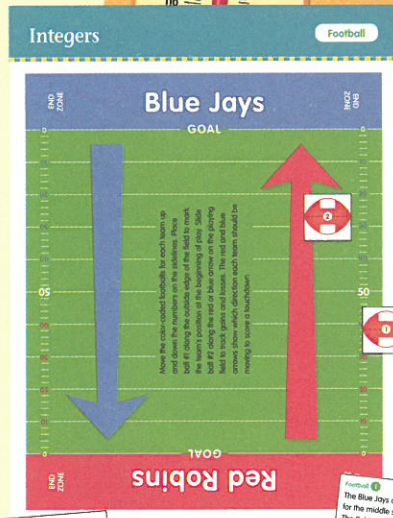
Skill: Apply understanding of positive and negative integers to solve word problems

Integers are whole numbers and their opposites.

The opposite of  $-3$  is  $+3$ .

The opposite of  $+3$  is  $-3$ .

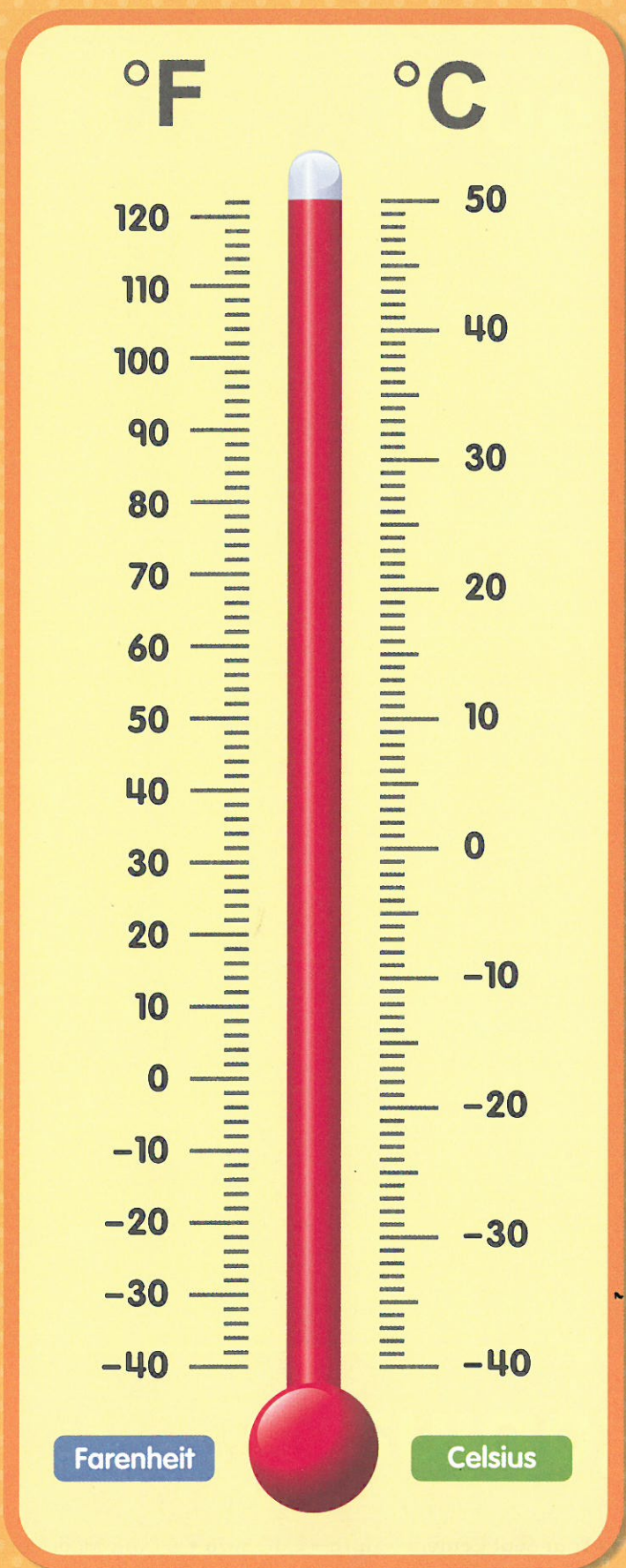
- 1 Lay out the mats and sort the cards into two groups: **Temperature** word problems and **Football** word problems.
- 2 Stack each group of cards in number order. Then read the problem on the first card.
- 3 Follow the instructions on the corresponding mat to help you solve the problem.
- 4 Write the answer or answers on the response form.
- 5 Solve the problem on each of the other cards the same way. Complete the problems in order.



**Football 1**  
Now the Blue Jays kick to the Robins. The Robins catch the ball at their 38-yard line and run 17 yards before being tackled. In the next three plays, they lose a total of 12 yards. At what yard line do they end up?

**Football 2**  
The Robins try kicking a field goal but miss it. Now the Jays get the ball again. They try a running play but end up losing 15 yards. Then they gain 3 yards on the second down, ten on the fourth down but lose 9 yards instead. How many total yards did the Jays gain or lose?

**Football 3**  
The Blue Jays and the Red Robins are battling for the middle school football championship. The Robins led 14-0 and the Jays got the ball on the first play, but lose 3 on the next and 9 yards 8 more after that. They finally gain back the Blue Jays gain or lose?



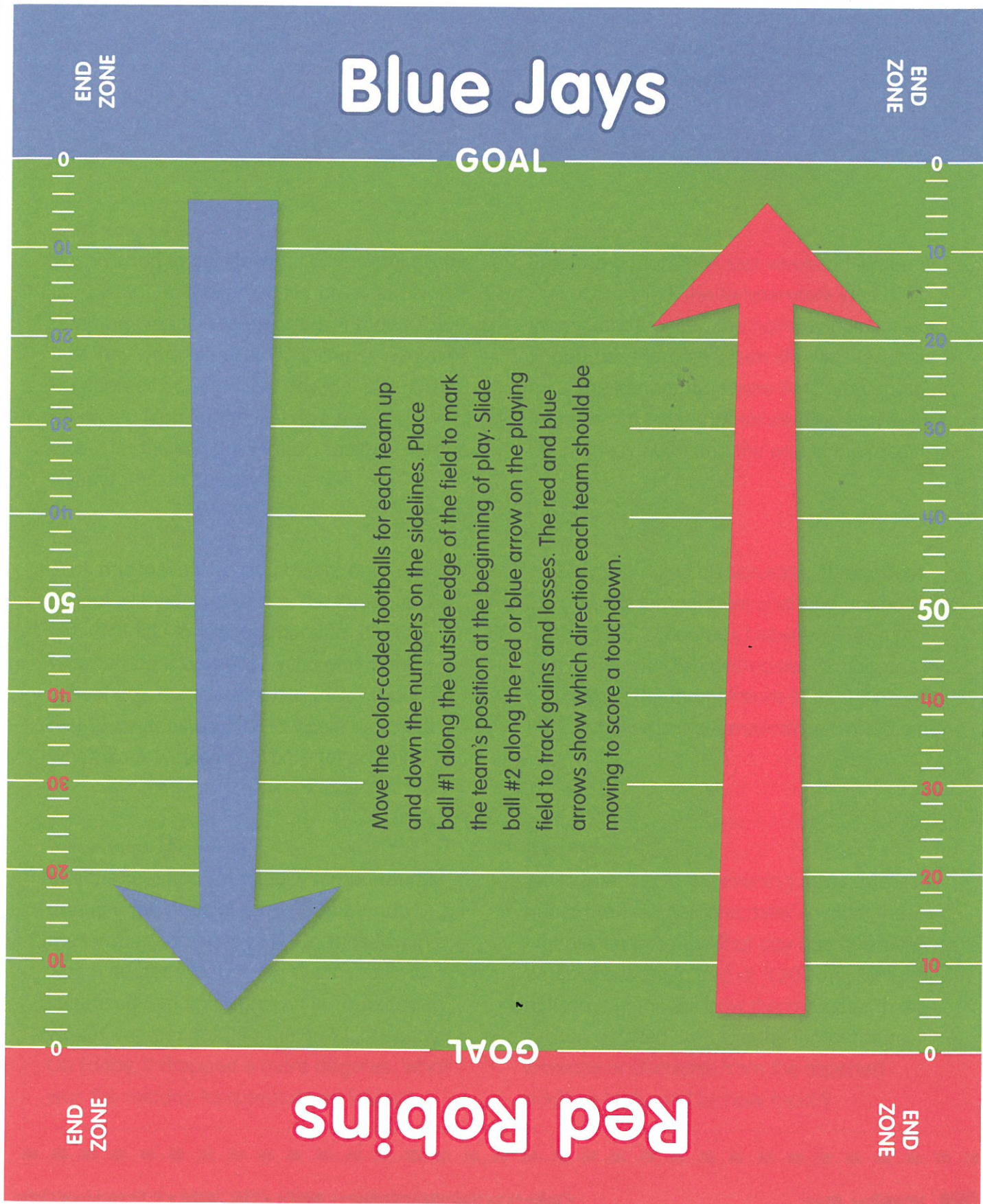
Use the scale on the thermometer to help you answer the question on each card.



Place arrow #1 on the outer edge of the scale to mark the beginning temperature.

Move arrow #2 up and down the scale to track temperature changes.





**Temperature 1**

Juan woke up at 7:30 a.m. and looked at the thermometer. The temperature was  $42^{\circ}\text{F}$ . By noon, it was 18 degrees warmer. What was the temperature at noon?

**Temperature 2**

At lunchtime on the 4th of July, the temperature in Lakeville, Minnesota, hit a record  $112^{\circ}\text{F}$ ! When the fireworks began that evening, it was still  $99^{\circ}\text{F}$ . How much had the temperature dropped since lunchtime?

**Temperature 3**

Roshan had to decide what to pack for his trip to Arizona. He looked up the predicted high temperatures for the eight-day trip and saw that they were expected to increase a total of 40 degrees from the first day to the last. The predicted high for the first day was  $73^{\circ}\text{F}$ . What was it for the last day? What was the average temperature increase per day?

**Temperature 4**

Sara ran a marathon last weekend. When the race started, the temperature was  $10^{\circ}\text{C}$ . When Sara reached the halfway point, it was 17 degrees warmer. When she finished the race, the temperature was  $14^{\circ}\text{C}$ . How many degrees did the temperature drop between the halfway point and the end of the race?

**Temperature 5**

Zack has to walk his dog before and after school every day. One day, the temperature was a frigid  $-16^{\circ}\text{F}$  in the morning. It had warmed up 11 degrees by the end of the school day, but the windchill factor made it feel 10 degrees colder. How cold did it feel when Zack walked his dog after school?

**Temperature 6**

Jessie went skiing on Saturday. Throughout the day, the temperature changed dramatically. It increased 21 degrees between 8:00 a.m. and noon and then decreased 22 degrees by 6:00 p.m. If the temperature at 6:00 p.m. was  $-8^{\circ}\text{C}$ , what was the temperature at 8:00 a.m.?

**Temperature 7**

Marcus kept track of midday temperatures during a full week of school. On Monday, the temperature was  $68^{\circ}\text{F}$ . On Tuesday, it was 9 degrees higher. On Wednesday, it increased 5 more degrees. On Thursday, it was 11 degrees colder than on Wednesday. On Friday, it dropped 6 more degrees. What was the midday temperature on Friday?

**Temperature 8**

While listening to the evening news, Melissa heard the weather forecaster say that the highest temperature that day had been  $0^{\circ}\text{C}$ . When she went to bed at 9:30 p.m., Melissa noticed that the window thermometer in the kitchen showed  $28^{\circ}\text{F}$ . Did the temperature increase or decrease from the reported daytime high, and by how much?

**Temperature 9**

Sasha did a report on extreme temperatures in Alaska. In Juneau one day, a temperature of  $-9^{\circ}\text{C}$  dropped 23 degrees in two hours. The same day, the temperature in Fairbanks dropped 19 degrees in two hours to a bone-chilling  $-30^{\circ}\text{F}$ . Which city was colder after the temperature dropped?

**Temperature 10**

During her vacation in Florida, Lily swam every day in the Gulf of Mexico. On the first day, the water temperature was  $85^{\circ}\text{F}$ . It rose 3 degrees the second day, dropped 7 degrees the third day, and went up 5 degrees the fourth day. On the fifth day, it was  $87^{\circ}\text{F}$ . Did it increase or decrease from the fourth day to the fifth day? On which day was the water the warmest?

**Football 1**

The Blue Jays and the Red Robins are battling for the middle school football championship. The Robins kick off, and the Jays get the ball at their own 20-yard line. They gain 15 yards on the first play, but lose 3 on the next and lose 8 more after that. They finally gain back 9 yards. How many total yards did the Blue Jays gain or lose?

**Football 2**

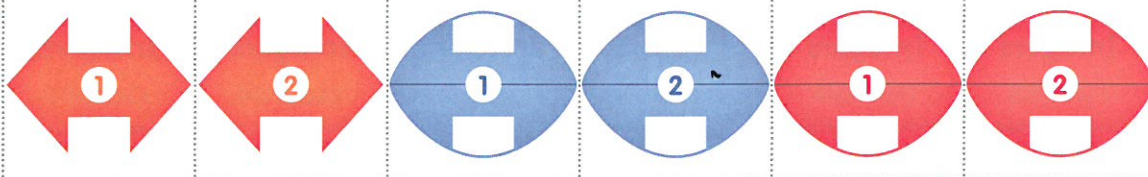
Now the Blue Jays kick to the Robins. The Robins catch the ball at their 38-yard line and run 37 yards before being tackled. In the next three plays, they lose a total of 12 yards. At what yard line do they end up?

**Football 3**

The Robins try kicking a field goal but miss it. Now the Jays get the ball again. They try a running play but end up losing 15 yards. They gain back 3 yards on the second down. Then they gain 7 more. They go for first and ten on the fourth down but lose 2 yards instead. How many total yards did the Jays gain or lose?

**Football 4**

Taking over at the Jays' 30-yard line, the Robins throw a 23-yard pass! On the next play, they gain 3 yards running, but on second and goal, a short pass to the end zone is intercepted by a Blue Jay! The Jay runs 42 yards down the field before being tackled! At what yard line was the Blue Jay stopped?



**Football 5**

A 10-yard gain on the next play puts the Jays at the Robins' 44-yard line. They gain 7 yards more on each of the next two plays. Then they gain 9 more, but a penalty is called and the ball is moved back 15 yards. How many total yards did the Blue Jays gain or lose in the last three plays?

**Football 6**

In the two minutes left before halftime, the Blue Jays throw two incomplete passes before completing a short pass that gains them only 9 yards. A penalty against the Robins on that play gives the Jays 5 more yards and a first down at the 22-yard line. At what yard line were the Blue Jays at the beginning of the play?

**Football 7**

The second half of the game starts with the score still zero to zero. Now the Jays kick off to the Robins. The Robins catch the ball at their 18-yard line. In the next three plays, they gain 7 yards, lose 12 yards, and gain 27 yards. At what yard line did each of the plays end?

**Football 8**

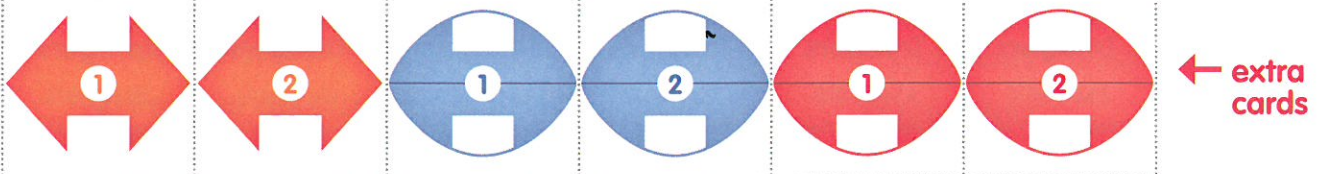
On the next play, a Red Robin catches a pass at the 50-yard line and runs the ball 3 yards before he trips and fumbles. The ball bounces backward 4 yards. Then a Blue Jay picks it up and runs 16 yards downfield before he's tackled. At what yard line was he tackled?

**Football 9**

After three incomplete passes, the Blue Jays unsuccessfully attempt a field goal and the Robins get the ball. They lose 9 yards on the first play and 11 on the second. Then they complete an amazing 42-yard pass! How many more yards do the Robins need to gain to score a touchdown?

**Football 10**

The Robins call a time out, but they take too long and lose 10 yards for delay of game. They complete a pass on the next play for a 23-yard gain but then lose 8 yards and gain back only 6. On the next play, the Jays intercept a pass at their own 10-yard line. They run the ball all the way down the field for a touchdown to win the game! How many yards was the Robins' pass, and how many yards was the touchdown run?



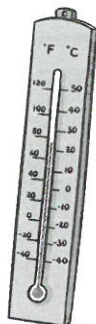
Name \_\_\_\_\_

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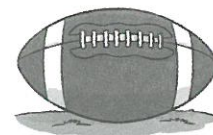
Use the mats to help you solve the word problem on each card. Write the answer or answers to the problem next to its number below.

## Temperature



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## Football



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