1 Kim left the library at exactly 3:15 PM, and drove to the museum at an average speed of 40 kilometres per hour.

If the museum was 60 kilometres from the library, at what time did he arrive at the museum?

A 4:15 PM

B 4:30 PM

C 4:45 PM

D 5:00 PM

E 5:15 PM

2 Ruby needs to wrap a total of 18 presents.
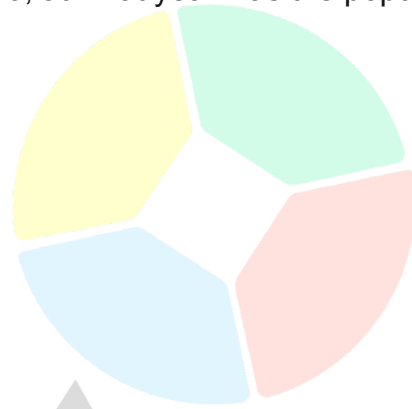
She can wrap 3 presents every hour.

If Ruby started wrapping presents at 7:00 AM and she wrapped presents with no interruptions, at what time will she finish wrapping all the presents?

A 11:00 AM

B 11:30 AM

C 12:00 PM

D 12:30 PM

E 1:00 PM

3 The population of the town of Hillsboro doubles every year.

If the population of Hillsboro in 2020 was 20 000, at what year was the population of Hillsboro 10 000?

A 2019

B 2018

C 2016

D 2015

E 2010

4 A water wheel fills a water tank at a constant rate of 30 litres per hour.

The total capacity of the water tank was 240 litres.

If the water wheel started filling the empty water tank at 10:00 AM, at what time did it fill the water tank?

A 4:00 PM

B 5:00 PM

C 6:00 PM

D 7:00 PM

E 8:00 PM

5 The analogue clock below shows the time when Ruby started doing her laundry.

If she did her laundry in $1\frac{1}{2}$ hours, which analogue clock shows the time she finished doing her laundry?

A

B

C

D

E

6 A train left the Green Oak station and headed toward the Red Cactus station at an average speed of 80 kilometres per hour.

The distance between the Green Oak station and Red Cactus station was 240 kilometres.

If the train arrived at Red Cactus station at exactly 4:15 PM, at what time did it leave the Green Oak station?

A 1:15 PM

B 1:30 PM

C 1:45 PM

D 2:00 PM

E 2:15 PM

7 The machine at the factory labels crayons at a rate of 125 crayons per hour.

Yesterday, the machine worked non-stop and with no interruptions labelling a total of 800 crayons.

If the machine finished labelling the crayons at 5:15 PM, at what time did it start labelling crayons yesterday?
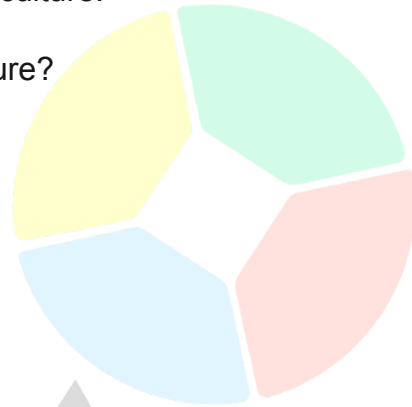
A 10:15 AM

B 10:36 AM

C 10:51 AM

D 11:15 AM

E 11:36 AM

8 The number of bacteria in a certain culture triples every 5 minutes.

At 8:30 AM, there were only 10 bacteria in the culture.

At what time were there 90 bacteria in the culture?

A 8:31 AM

B 8:32 AM

C 8:33 AM

D 8:35 AM

E 8:40 AM

9 An outlet pipe drains oil from a tanker at a rate of 40 litres per hour.

The tanker had a capacity of 290 liters.

If the outlet pipe finished draining all the oil from the full tanker at 8:45 PM, what time did it start draining the oil?

A 1:15 PM

B 1:30 PM

C 1:45 PM

D 2:15 PM

E 2:30 PM

10 The analogue clocks below show the start and end times of Jenny's violin lessons.
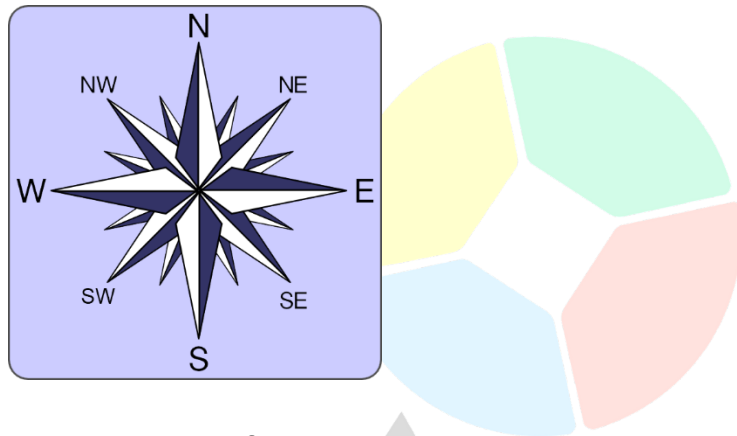
START TIME   END TIME

How long did Jenny's violin lessons last?

A 1 hour 25 minutes

B 1 hour 45 minutes

C 2 hours 20 minutes

D 2 hours 25 minutes

E 2 hours 45 minutes
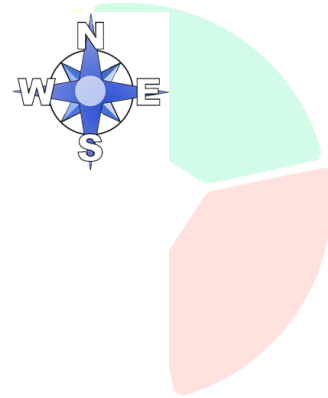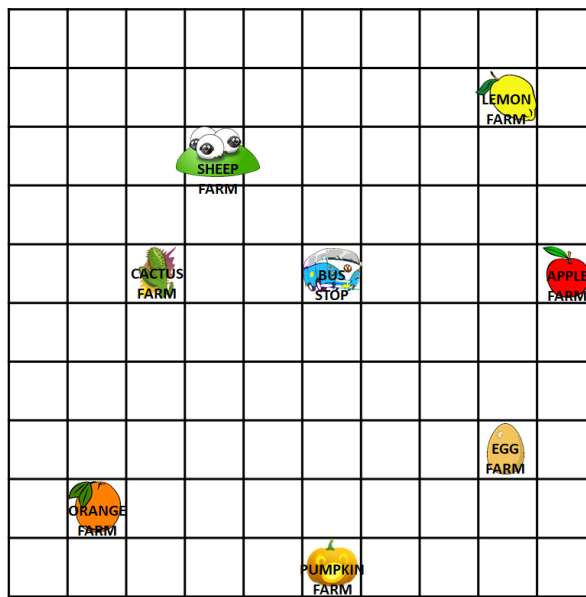
11 A compass is shown below.

John was facing the northeast before he made seven quarter turns anti-clockwise.

In what direction was John facing after he made the turn?

A Northwest

B West
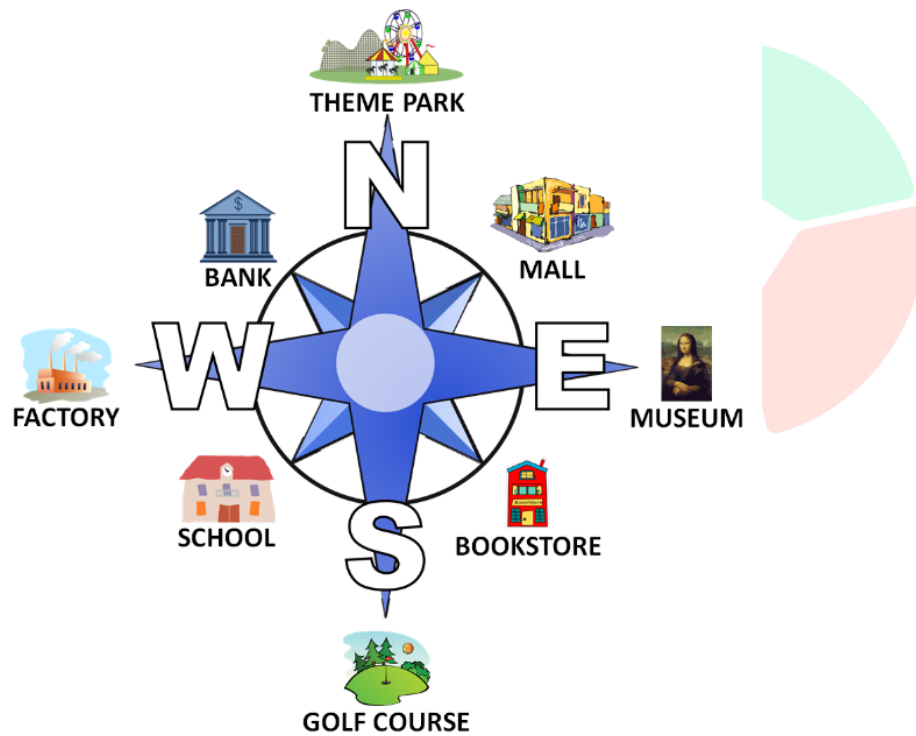
C Southwest

D East

E Southeast

12 The grid below shows the locations of the bus stop and the surrounding farms in Winterville.

If Mark wanted to go to the lemon farm from the bus stop, in which direction should he go?

A Northeast

B North

C Northwest

D East

E Southeast

13 The picture below shows the locations of some of the places in Blue Ridge.
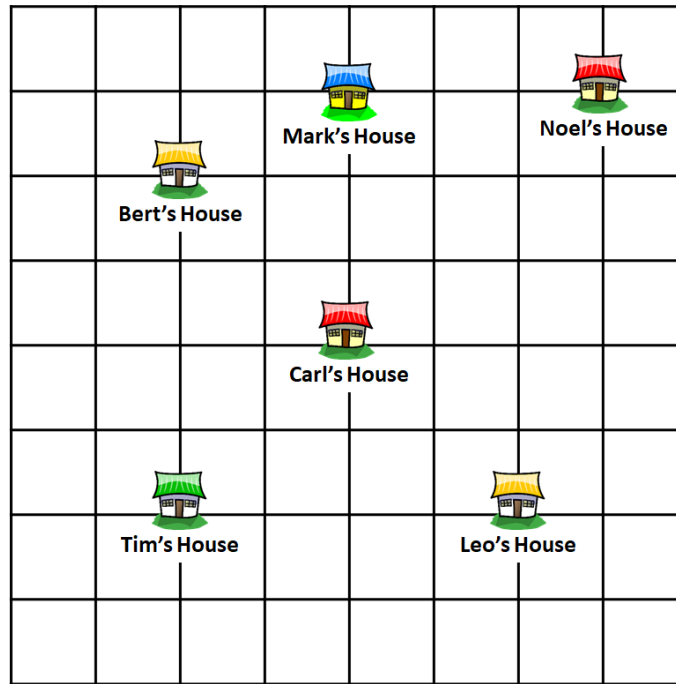

Andrea was facing the museum and wanted to go to the golf course.

How many quarters turns anticlockwise should she turn?

A One

B Two

C Three

D Four

E Five

14 The picture below shows the locations of the houses of seven friends.
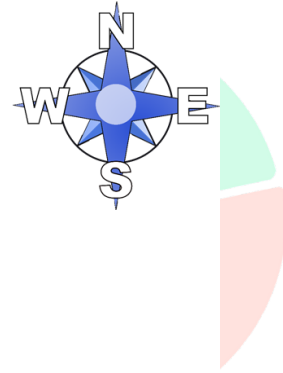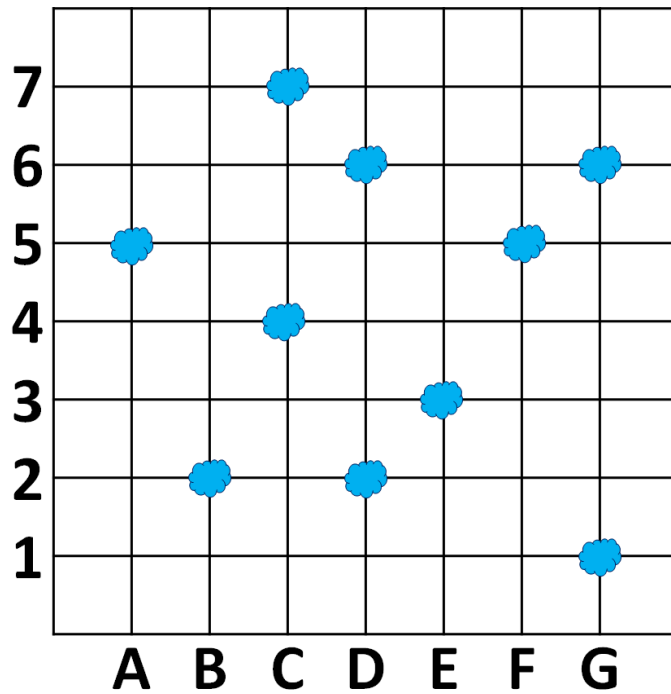

Bert's house is located north of Carl's house.

In what direction from Carl's house is Noel's house located?

A Northeast

B East

C Southeast

D South

E Southwest

15 The grid below shows the locations of ten floating icebergs.

A boat was docked at **B6** and there is a group of penguins directly Southeast of where the boat was docked.

What was the location of the iceberg where the group of penguins was located?
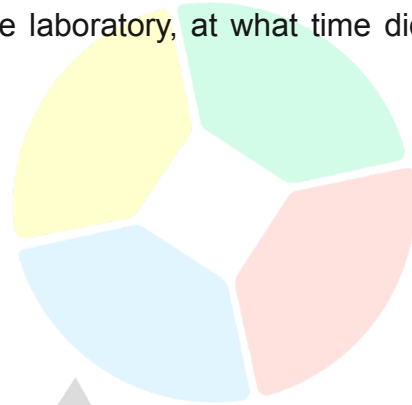
A C4

B D2

C D6

D E3

E G1

16 Patricia left the science laboratory at 1:20 PM and walked toward the gym at a rate of 12 kilometres per hour.

If the gym was 4 kilometres from the science laboratory, at what time did she arrive at the gym?

A 1:25 PM

B 1:30 PM

C 1:35 PM

D 1:40 PM

E 1:50 PM

17 Frank spent 30 minutes making 200 paper aeroplanes.

Jake also made 200 paper aeroplanes but spent $\frac{1}{3}$ of the time it took Frank to make 200 paper aeroplanes.

If they both finished making the paper aeroplanes at the same time and Frank started making paper aeroplanes at 9:00 AM, what time did Jake start making the paper aeroplanes?
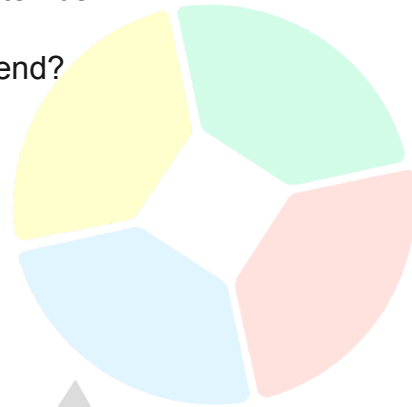
A 9:10 AM

B 9:15 AM

C 9:20 AM

D 9:25 AM

E 9:30 AM

18 Robert took vacation leave from his work that lasted 1 week 3 days.

His vacation leave started on Wednesday, September 24.

On which day and date will his vacation leave end?

A Friday, October 2

B Friday, October 3

C Saturday, October 3

D Sunday, October 3

E Saturday, October 4

19 Herbert needs to make four copies of the report in time for the 10:00 AM meeting today.

Each copy of the report has 80 pages.

If the office printer can print 120 pages per hour, what is the latest time that Herbert can start printing the reports and still be in time for the meeting?

A 7:20 AM

B 7:30 AM

C 7:40 AM

D 8:20 AM

E 8:40 AM

20 The analogue clock below shows the time Hank finished debugging the computer program.

If Hank spent 225 minutes debugging the computer program, what time did he start?

A 12:40 PM

B 12:20 PM

C 12:00 PM

D 11:40 AM

E 11:20 AM

21 William only had a few days left to harvest a total of 3 000 kilograms of cabbages before the first frost hit his farm on July 14ᵗʰ.

He decided to harvest the cabbages at a rate of 300 kilograms per day on the first two days and twice that rate to harvest the remaining cabbages.

What is the latest date that he could start harvesting the cabbages before the first frost hit his farm?

A July 6th

B July 7th

C July 8th

D July 9th

E July 10th

22 Buses leave the bus station every 30 minutes.

If the last trip for the day leaves the bus station at 9:55 PM, which of the following could be a time at which a bus leaves the bus station?

A 7:15 AM

B 9:35 AM

C 11:05 AM

D 2:35 PM

E 4:55 PM

23 The number of bacteria in a certain culture doubles every three minutes.

If the number of bacteria in the culture at 3:42 PM was 192 000, at what time were there 12 000 bacteria in the culture?

A 3:27 PM

B 3:30 PM

C 3:33 PM

D 3:36 PM

E 3:38 PM

24 Mike can paint 1 birdhouse every 20 minutes.

He finished painting 20 birdhouses at 4:20 PM.

If Mike had worked twice as fast as he was working, at what time would he have finished painting the 20 birdhouses?
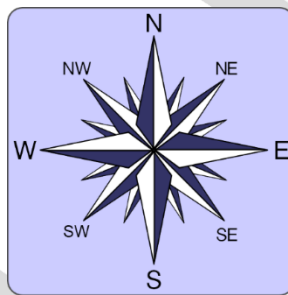
A 1:00 PM

B 1:10 PM

C 1:20 PM

D 1:40 PM

E 2:20 PM

25 If 4 800 seconds ago was 8:55 AM, what time is it 6 300 seconds later?

A 11:50 AM

B 11:55 AM

C 12:00 PM

D 12:10 PM
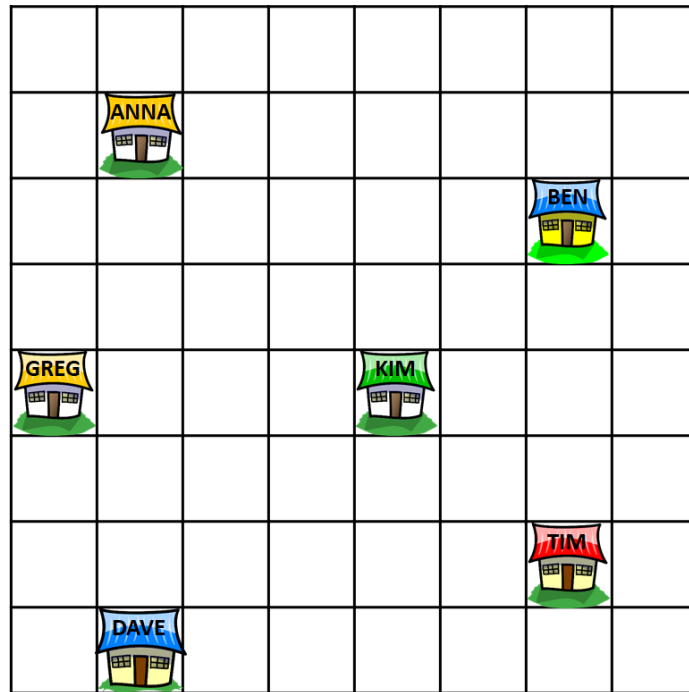
E 12:20 PM

26 A compass is shown below.

Patrick ended up facing the north direction after making three quarter turns clockwise and then two half turns anti-clockwise.

In what direction was Patrick facing before he made the turns?

A Northwest

B West
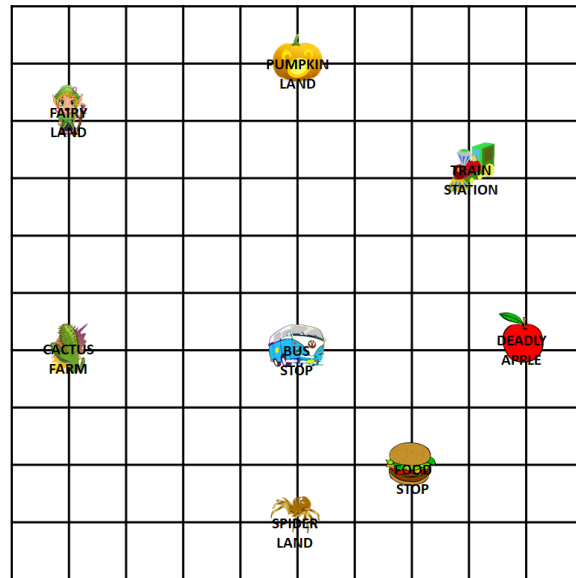
C Southwest

D East

E Southeast

27 The picture below shows the locations of the houses of seven friends.

If Anna's house is located south of Kim's house, in what direction from Kim's house is Greg's house located?

A Northeast

B East
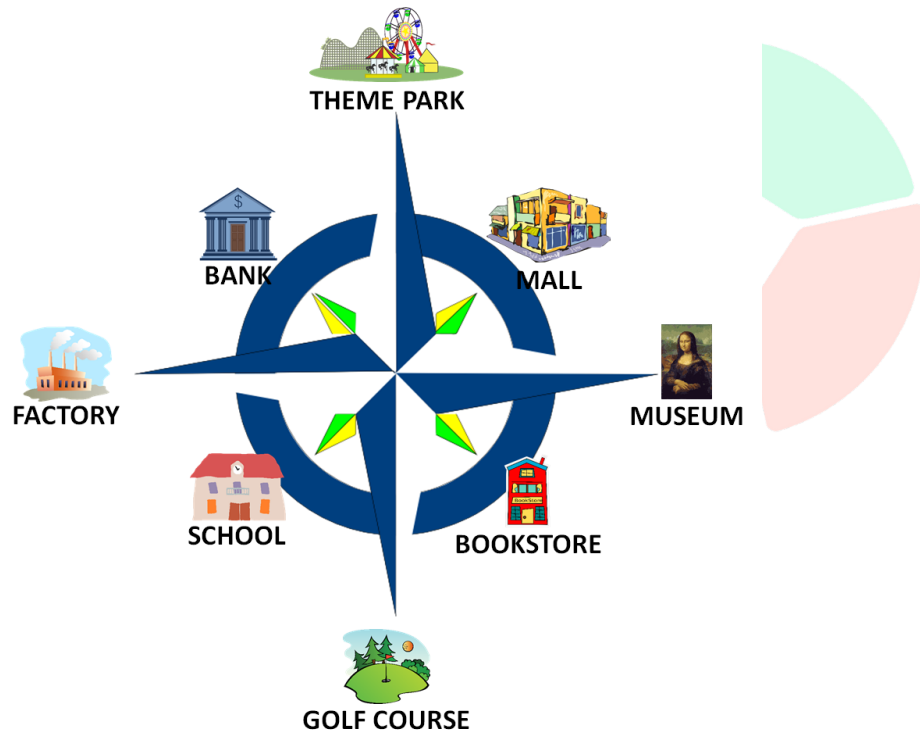
C Southeast

D South

E Southwest

28 A grid below shows some locations in Fantasyland.

If the deadly apple is located north of the bus stop, what is located southwest of the bus stop?

A Spider land

B Fairy land

C Pumpkin land

D Cactus farm

E Food stop

29 The figure below shows the locations of some of the places in Frankfort.

THEME PARK
BANK
MALL
FACTORY
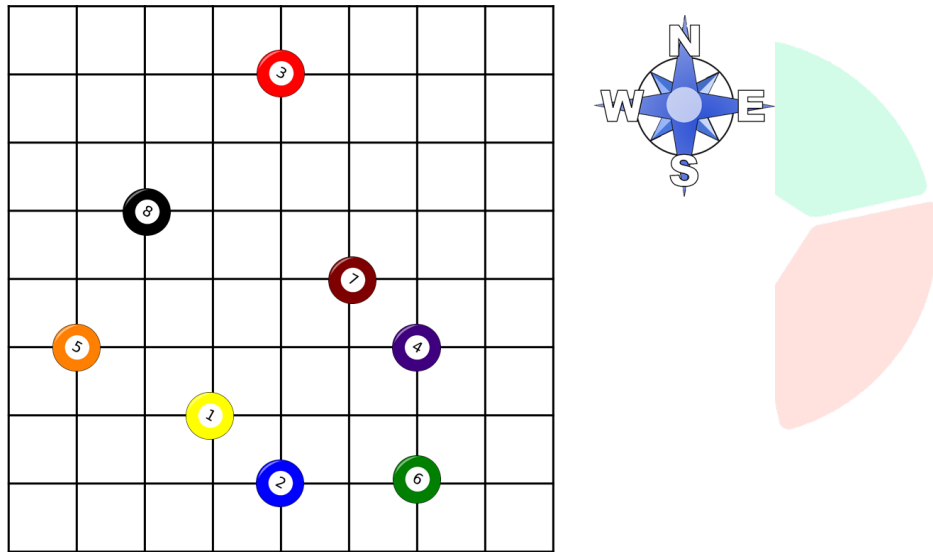MUSEUM
SCHOOL
BOOKSTORE
GOLF COURSE

The bookstore is located north.

If Sarah wanted to face the museum, in which direction should she be facing?

A Northwest

B Northeast

C East

D Southwest

E West

30 The figure below shows the locations of eight billiard balls on the table.

The cue ball is located north of the number 2 ball, east of the number 5 ball, and south of the number 3 ball.

What ball is southeast of the cue ball?

A Number 1 ball

B Number 4 ball

C Number 6 ball

D Number 7 ball

E Number 8 ball