Chapter 14: Maps and Locations

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Exercise 14.1 — Finding Directions — Manu and the Rising Sun (p. 171)

Q1 Manu is facing the rising Sun. That direction is ___. His left hand is pointing in the ___ direction. His right hand is pointing in the ___ direction. Which way is west?

SOLUTION

The Sun rises in the East. So Manu is facing East.

When you face East:
Your left hand points North.
Your right hand points South.

West is the direction behind you (opposite to the East).

Answer: That direction is East. His left hand points North. His right hand points South. West is the direction behind Manu (opposite to East).

Exercise 14.2 — Bird Watching! — Colouring Tents by Direction Clues (p. 172)

Q1 Children are at a bird-watching camp. Read the clues and colour the tents in the camp accordingly.
- The tent to the west of the road is blue.
- The tent closest to the lake is green.
- The tent north of the green tent is purple.
- The tent south of the lake is yellow.
- Now, draw a tent to the east of the lake.

SOLUTION

Use the compass (N up, E right, W left, S down) and study the camp map.

Step 1: The road runs north-south. The tent on the west (left) side of the road = colour it BLUE.
Step 2: The tent closest to the lake (beside the lake) = colour it GREEN.
Step 3: The tent directly north of the green tent = colour it PURPLE.
Step 4: The tent to the south of the lake (below the lake) = colour it YELLOW.
Step 5: Draw a new tent on the east (right) side of the lake.

Answer: Blue tent: west of the road. Green tent: closest to the lake. Purple tent: north of the green tent. Yellow tent: south of the lake. Draw a new tent to the east of the lake.

Exercise 14.3 — Map of a Room — Directions from the Girl (p. 172)

Q1 Write the directions of the following in relation to the girl standing at the centre of the room.
Window ___
Bed ___
Cupboard ___
Bedside table ___

SOLUTION

Use the compass shown in the image (N up, E right, W left, S down).

The girl stands at the centre of the room.
Window: on the back (north) wall => North.
Bed: to the right side of the room => East.
Cupboard: to the left side of the room => West.
Bedside table: beside the bed, to the right side => East (or South-East).

Answer: Window: North. Bed: East. Cupboard: West. Bedside table: East (beside the bed on the right side of the room).

Q2 Make a drawing of your room and locate the direction in which different things have been placed in relation to you standing at the centre of the room. Make the direction arrow for your room. Write the names of the things that are placed in the following directions: East, West, North, South.

SOLUTION

This is an open activity — draw your own room layout.
Stand at the centre of your room. Face the rising sun to find East.
Then mark all four directions on your drawing.

Example answers (for a typical bedroom):
East: Window / Door
West: Cupboard / Wardrobe
North: Study table / Desk
South: Bed / Almirah

Your answers will depend on how your room is arranged.

Answer: Open activity. Draw your room, mark N/S/E/W, then name the objects in each direction. Example: East = door, West = cupboard, North = study table, South = bed.

Exercise 14.4 — Zoo Trip — Bus Route and Street Map (p. 173–174)

Q1 Bus Route: The bus will start from the parking area. It will go north and then it will take a right turn onto ___ Road driving in the ___ direction to reach Stop 1 (S1). To reach Stop 2 (S2), it will turn ___ (right/left) onto ___ Road driving in the ___ direction.

SOLUTION

The bus starts from PARKING at the south end of the map.

Going north from the Parking area, the bus travels up the central road.
It then takes a RIGHT turn (right from north = east) onto HOSPITAL ROAD.
It drives EAST along Hospital Road to reach Stop 1 (S1).

From Stop 1, to reach Stop 2 (S2) near Children's Park:
The bus turns RIGHT (right from east = south) onto PARK ROAD.
It drives SOUTH along Park Road to reach Stop 2 (S2) near Children's Park.

Answer: Right turn onto Hospital Road driving East to reach Stop 1. Then right turn onto Park Road driving South to reach Stop 2.

Q2 (a) Whose houses are situated to the east of Jaideep's house?
(b) Mark the route from Ravi's house to the children's park.
(c) Which stop is closer to Lali's house?
(d) Golu is running late. Trace the route to help him reach the nearest bus stop.
(e) In which direction would Prem have to move to reach Stop 2?

SOLUTION

(a) On the map, Park Road runs north-south on the right. Jaideep's House is west of Park Road.
The houses to the EAST of Jaideep's House (across Park Road) are:
Prem's House and Raju's House.

(b) Route from Ravi's House to Children's Park:
From Ravi's House go east to the main road, then north past Rohan's House,
then east along Hospital Road (or north on Park Road) to Children's Park.
(Mark this path on the map with a pencil.)

(c) Lali's House is at the top-left (north-west) of the map.
Stop 1 (S1) is on Hospital Road — the closest road to Lali's area.
Stop 2 (S2) is near Children's Park to the north-east.
Stop 1 (S1) is closer to Lali's House.

(d) Golu's House is on Hospital Road near Tinku's House.
The nearest bus stop is Stop 1 (S1), which is on Hospital Road.
Route: walk east along Hospital Road from Golu's House to reach Stop 1 directly.

(e) Prem's House is east of Park Road (on the right side of the map).
Stop 2 (S2) is at the north end of Park Road near Children's Park.

Prem would have to move NORTH to reach Stop 2.

Answer: (a) Prem's House and Raju's House are to the east of Jaideep's House. (b) Go east then north on the main road, then east along Hospital Road or north on Park Road to Children's Park. (c) Stop 1 (S1) is closer to Lali's House. (d) Golu walks east along Hospital Road to reach Stop 1. (e) Prem moves North to reach Stop 2.

Exercise 14.5 — Delhi Metro Train Stations — Metro Map Reading (p. 175–176)

Q1 Read the key to the symbols and identify them on the map. What do the different coloured lines represent? Mark the Qutb Minar station on the Yellow Line and the Supreme Court station on the Blue Line.

SOLUTION

From the map key:

1. Red Line 2. Yellow Line 3. Blue Line 4. Airport Express Line
5. Green Line 6. Violet Line 7. Pink Line 8. Magenta Line
9. Circle = Metro Station 10. Double circle = Interchange Station

Each coloured line represents a different metro route.
They help passengers choose the right train to reach their destination.

Qutb Minar station: Mark it on the YELLOW LINE at the southern end of the Yellow Line.
Supreme Court station: Mark it on the BLUE LINE near Rajiv Chowk.

Answer: Each colour = one metro route. Qutb Minar is on the Yellow Line (southern end). Supreme Court is on the Blue Line near Rajiv Chowk.

Q2 (a) Look at the metro map and trace different routes from the Qutb Minar metro station to the Supreme Court metro station.
(b) Lali says 'We can take the Yellow Line and change the metro at Hauz Khas to take the Magenta Line.' If the children follow Lali's suggestion, at which station(s) do they need to change the metro line again to reach the Supreme Court metro station?
(c) Which route has the least number of stations between Qutb Minar and Supreme Court?
(d) Which metro route(s), do you think, is/are the best way to reach the zoo from Qutb Minar?

SOLUTION

(a) Two main routes from Qutb Minar to Supreme Court:
Route 1: Yellow Line north to Rajiv Chowk (interchange), then Blue Line to Supreme Court.
Route 2: Yellow Line north to Hauz Khas, change to Magenta Line,
then Magenta to Janakpuri West (interchange), then Blue Line east to Supreme Court.
(Trace these paths on the metro map with your finger.)

(b) Following Lali's plan (Yellow -> Hauz Khas -> Magenta Line):
From Hauz Khas on the Magenta Line, you need to reach the Blue Line.
Change again at Janakpuri West station (Magenta-Blue interchange) to the Blue Line,
then travel east on the Blue Line to reach Supreme Court station.
Station to change: Janakpuri West.

(c) Route 1 (Yellow Line -> Rajiv Chowk -> Blue Line -> Supreme Court) has the least number of stations. From Rajiv Chowk, Supreme Court is just one stop away on the Blue Line.

(d) The best route is Route 1: take the Yellow Line to Rajiv Chowk,

then the Blue Line one stop to Supreme Court. It is direct and has fewer changes.

Answer: (a) Route 1: Yellow Line to Rajiv Chowk, change to Blue Line to Supreme Court. Route 2: Yellow to Hauz Khas, Magenta to Janakpuri West, Blue to Supreme Court. (b) Change again at Janakpuri West. (c) Route 1 (via Rajiv Chowk) has the fewest stations. (d) Route 1 (Yellow to Rajiv Chowk, then Blue Line) is the best — it is the most direct.

Exercise 14.6 — Let Us Do — School Map with Hidden Objects (p. 176)

Q1 Make a map showing the different places in your school. Make a key for the symbols used in the map. Hide some objects in these places. Mark the positions where things are hidden with red dots or flags. Now, challenge your friends to find the hidden things by reading the map. A sample map and its key are given.

SOLUTION

This is a hands-on activity. Here is how to do it:

Step 1: Draw a simple top-view (bird's-eye view) map of your school on paper.
Include: Gate, Classrooms, Library, Playground, Garden, Toilets, Water tank.
Step 2: Make a KEY (legend) — draw a small symbol for each place
(e.g., a square for classroom, a circle for tree, a star for hidden object).
Step 3: Choose 3-5 spots in the school and hide small objects there.
Step 4: Mark each hiding spot on your map with a red dot or flag symbol.
Step 5: Give the map to a friend and ask them to find the objects.

The sample map in the book shows: Gate, Road, Buildings, Tank, Garden, Trees, Wall, Fence, Seat/Bench, Path — each with its own symbol in the key.

Answer: Draw a top-view map of your school, create a key for your symbols (gate, road, building, tree, garden etc.), mark hidden objects with red dots, and challenge friends to find them using your map.

Exercise 14.7 — Anthill in the Zoo — Grid Directions and Distances (p. 177)

Q1 Fill in the blanks with the distances and directions in which the ant must move from its starting position.
(a) To get to the laddoos, the ant has to crawl 2 cm towards the east.
(b) To get to the sugar, the ant has to crawl ___cm in the ___ direction.
(c) To get to the bread, the ant has to crawl ___cm in the ___ direction; then ___cm in the ___ direction.
(d) To get to the apple, the ant needs to crawl ___cm towards ___, and then ___cm towards ___, and finally ___cm towards ___.
Identify other routes to reach the point where apple is located. Which one is the shortest?

SOLUTION

Each square on the grid = 1 cm. The ant starts where the dashed paths meet.

(a) Laddoos: 2 cm east. [Given in the book]

(b) Sugar is directly NORTH of the ant.
Count the squares north from the ant to the sugar pile = 3 squares.
Answer: 3 cm in the North direction.

(c) Bread is to the west and then south of the ant.
From the ant, move 3 cm WEST (left) to reach the column of bread,
then 2 cm SOUTH (down) to reach the bread.
Answer: 3 cm west, then 2 cm south.

(d) Apple is south-east of the ant. It is 3 squares east and 3 squares south.
The path drawn in the book goes:
First: 5 cm towards SOUTH (down 5 squares) to the turning point.
Then: 3 cm towards EAST (right 3 squares).
Finally: 2 cm towards NORTH (up 2 squares) to reach the apple.

Other routes to the apple (all cover 3 cm east + 3 cm south net):
Route 2: 3 cm south, then 3 cm east (total 6 cm).
Route 3: 3 cm east, then 3 cm south (total 6 cm).

The shortest distance is 6 cm (3 cm east + 3 cm south). Any shortest route is 6 cm long.

Answer: (a) 2 cm east [given]. (b) 3 cm North. (c) 3 cm West, then 2 cm South. (d) Apple: 5 cm South, then 3 cm East, then 2 cm North. Shortest route: 3 cm East then 3 cm South (or 3 cm South then 3 cm East) = 6 cm.

Exercise 14.8 — Locating the Animals in the Zoological Park — Zoo Grid Coordinates (p. 178)

Q1 To reach the tortoise, move ___ steps towards east and reach the ___ column. Then move ___ step(s) ___ and reach the first ___. The location of the tortoise is (4,1). What is at (1,4)?

SOLUTION

To reach the tortoise at (4,1):
Start from 0. Move 4 steps east to reach the 4th column.
Then move 1 step north to reach the 1st row.
The tortoise is at (4,1). [Confirmed by the book.]

Fill in blanks: move 4 steps towards east, reach the 4th column.
Then move 1 step north and reach the 1st row.

What is at (1,4)?
Start from 0. Move 1 step east (column 1), then 4 steps north (row 4).
At column 1, row 4 = Snake.

Answer: Move 4 steps east to the 4th column; then 1 step north to the 1st row. At (1,4): Snake.

Q2 1. Locate the animal at the following positions on the map.
(a) (11,11) (b) (2,6) (c) (6,4) (d) (3,10) (e) (11,3) (f) (10,9)

SOLUTION

Read coordinates as (column, row): move east column steps, then north row steps from 0.

(a) (11,11): column 11, row 11 — top-right area of the zoo grid = Toucan (Hornbill).
(b) (2,6): column 2, row 6 — left-centre area = Tiger.
(c) (6,4): column 6, row 4 — centre area = Elephant.
(d) (3,10): column 3, row 10 — upper-left area = Flamingo.
(e) (11,3): column 11, row 3 — right side, lower area = Monkey.
(f) (10,9): column 10, row 9 — upper-right area = Zebra.

Answer: (a) Toucan (b) Tiger (c) Elephant (d) Flamingo (e) Monkey (f) Zebra

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Q3 2. Write the position of the following animals on the map.
(a) Lion (b) Elephant (c) Tortoise (d) Deer (e) Panda (f) Crocodile

SOLUTION

Find each animal on the zoo grid image, then read its (column, row) coordinate.

(a) Lion: located at column 3, row 3 => (3,3).
(b) Elephant: located at column 6, row 4 => (6,4).
(c) Tortoise: column 4, row 1 => (4,1). [Confirmed by the book.]
(d) Deer: located at column 10, row 6 => (10,6).
(e) Panda: column 1, row 1 => (1,1). [Confirmed by the book.]
(f) Crocodile: located at column 10, row 1 => (10,1).

Answer: (a) Lion: (3,3) (b) Elephant: (6,4) (c) Tortoise: (4,1) (d) Deer: (10,6) (e) Panda: (1,1) (f) Crocodile: (10,1)

Q4 3. Place dots of different colours on the following positions.
(a) (8,3) Red (b) (2,9) Green (c) (7,3) Blue (d) (3,8) Orange (e) (8,6) Black (f) (6,6) Pink

SOLUTION

Find each position on the grid and place a coloured dot:
(a) (8,3): column 8, row 3 — place a RED dot.
(b) (2,9): column 2, row 9 — place a GREEN dot.
(c) (7,3): column 7, row 3 — place a BLUE dot.
(d) (3,8): column 3, row 8 — place an ORANGE dot.
(e) (8,6): column 8, row 6 — place a BLACK dot.
(f) (6,6): column 6, row 6 — place a PINK dot.

To place a dot: count 8 squares east, then 3 squares north (for red), and so on.

Answer: Place dots on the zoo grid: Red at (8,3), Green at (2,9), Blue at (7,3), Orange at (3,8), Black at (8,6), Pink at (6,6). Count east first, then north from the 0 corner.