NUMBER: DIRECTED NUMBERS IN CONTEXT

Best Guess Mastery Worksheet (Target Grade 2/3)

I Do

The table shows the temperatures recorded at midnight and at midday for each of five Middle Eastern cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
Amman	−2	9
Tehran	−5	3
Riyadh	8	22
Beirut	12	18
Jerusalem	4	11

(a) Which city had the lowest midnight temperature?

(1)

(b) Find the difference between the midnight temperature and midday temperature for Amman.

°C **(1)**

From Monday to Thursday, the midday temperature in Tehran decreased by 2°C each day.

(c) Work out the midday temperature in Tehran on Thursday.

°C **(2)**

We Do

The table shows the temperatures recorded at midnight and at midday for each of five European cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
Oslo	−8	−1
Paris	2	11
Berlin	−4	5
Madrid	1	14
Rome	6	15

(a) Which city had the lowest midnight temperature?

(1)

(b) Find the difference between the midnight temperature and midday temperature for Berlin.

°C **(1)**

From Monday to Wednesday, the midnight temperature in Paris dropped by 3°C each night.

(c) Work out the midnight temperature in Paris on Wednesday.

°C **(2)**

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Best Guess Mastery Worksheet (Target Grade 2/3)

You Do 1

The table shows the temperatures recorded at midnight and at midday for each of five Asian cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
Beijing	−6	2
Tokyo	4	12
Seoul	−3	5
Ulaanbaatar	−15	−4
Taipei	14	21

(a) Which city had the lowest midnight temperature?

(1)

(b) Find the difference between the midnight temperature and midday temperature for Seoul.

°C **(1)**

From Monday to Friday, the midday temperature in Beijing increased by 1°C each day.

(c) Work out the midday temperature in Beijing on Friday.

°C **(2)**

You Do 2

The table shows the temperatures recorded at midnight and at midday for each of five South American cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
Bogota	5	18
La Paz	−4	10
Lima	16	22
Santiago	2	15
Buenos Aires	11	24

(a) Which city had the lowest midnight temperature?

(1)

(b) Find the difference between the midnight temperature and midday temperature for La Paz.

°C **(1)**

From Monday to Thursday, the midnight temperature in Santiago dropped by 2°C each night.

(c) Work out the midnight temperature in Santiago on Thursday.

°C **(2)**

NUMBER: DIRECTED NUMBERS IN CONTEXT

Best Guess Mastery Worksheet (Target Grade 3/4)

Challenge 1

The table shows the temperatures recorded at midnight and at midday for each of five UK cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
London	−1	8
Edinburgh	−5	3
Cardiff	0	7
Belfast	−2	6
Manchester	−3	5

(a) Which city had the greatest difference between its midnight and midday temperatures?

(1)

(b) Work out the difference between the midday temperature in London and the midnight temperature in Edinburgh.

°C **(1)**

From Monday to Friday, the midnight temperature in Manchester dropped by 1.5°C each night.

(c) Work out the midnight temperature in Manchester on Friday.

°C **(2)**

Challenge 2

The table shows the temperatures recorded at midnight and at midday for each of five Nordic cities on a Monday one week.

City	Midnight temperature (°C)	Midday temperature (°C)
Bergen	−2	5
Malmo	1	8
Tromso	−12	−5
Helsinki	−7	−1
Reykjavik	−4	2

(a) Work out the difference between the highest midday temperature and the lowest midnight temperature in the table.

°C **(2)**

(b) The midnight temperature in a new city, Oulu, is 6°C colder than the midnight temperature in Helsinki. Work out the midnight temperature in Oulu.

°C **(1)**

On Monday, the temperature in Tromso at 6 PM was −3°C. The temperature dropped by 1.5°C every hour.

(c) Work out the temperature at midnight.

°C **(2)**

Answers & Worked Solutions

I Do:

(a) **Tehran** (−5 is the lowest number)

(b) 9 − (−2) = **11 °C**

(c) Monday = 3°C. Tuesday = 1°C. Wednesday = −1°C. Thursday = **−3 °C**

We Do:

(a) **Oslo** (−8 is the lowest number)

(b) 5 − (−4) = **9 °C**

(c) Monday = 2°C. Tuesday = −1°C. Wednesday = **−4 °C**

You Do 1:

(a) **Ulaanbaatar** (−15 is the lowest number)

(b) 5 − (−3) = **8 °C**

(c) Mon = 2, Tue = 3, Wed = 4, Thu = 5, Fri = **6 °C**

You Do 2:

(a) **La Paz** (−4 is the lowest number)

(b) 10 − (−4) = **14 °C**

(c) Mon = 2, Tue = 0, Wed = −2, Thu = **−4 °C**

Challenge 1:

(a) Differences: Lon (9), Edi (8), Car (7), Bel (8), Man (8). Greatest is **London**.

(b) London midday (8) − Edinburgh midnight (−5) = 8 − (−5) = **13 °C**

(c) 4 nights drop (Mon to Fri). Total drop = 4 × 1.5 = 6°C. Final = −3 − 6 = **−9 °C**

Challenge 2:

(a) Highest midday = Malmo (8). Lowest midnight = Tromso (−12). Difference = 8 − (−12) = **20 °C**

(b) Oulu = Helsinki midnight (−7) − 6 = **−13 °C**

(c) 6 PM to midnight is 6 hours. Drop = 6 × 1.5 = 9°C. Midnight temp = −3 − 9 = **−12 °C**