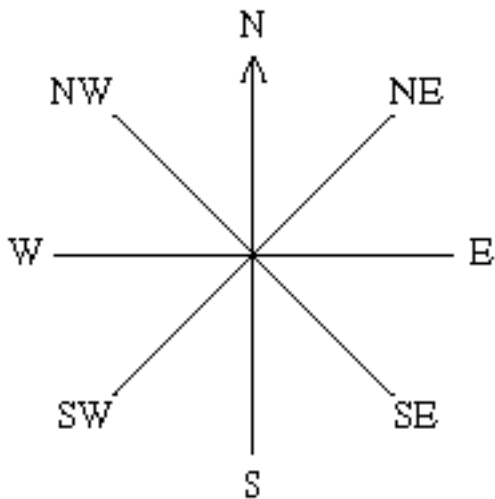
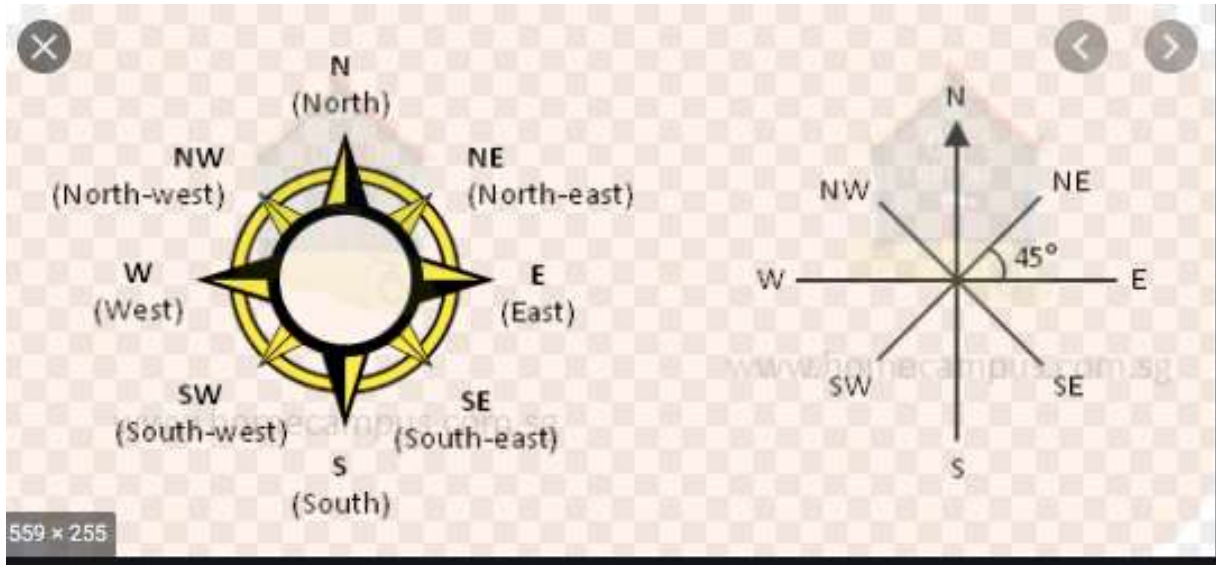




Model



Turning from N to S is 180°
clockwise or anticlockwise

Turning from NE to SE
is 90° clockwise (or 270° anti-
clockwise)

Turning clockwise from NE to E
is 45° (or 315° anticlockwise)

Mild


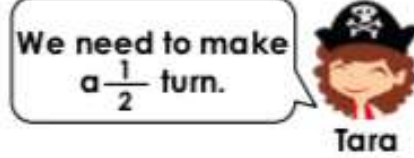
1a. These mice are facing west. They need to turn to face north to find the cheese.




Who do you agree with? Explain.

☆


1b. These pirates are facing north. Their captain tells them they need to turn to face south.

Who do you agree with? Explain.

☆


2a. Which of the following cards could be used to complete the statement? Give all of the possible answers.



Turning from E to ___ > a 180° turn

☆

2b. Which of the following cards could be used to complete the statement? Give all of the possible answers.




Turning from ___ to N < a 180° turn

☆

3a. Starting at 12:15, the minute hand makes more than 4 but fewer than 7 quarter turns clockwise.


What times could the clock show after the turns?



☆

3b. Starting at 18:30, the minute hand makes more than 3 but fewer than 6 quarter turns clockwise.


What times could the clock show after the turns?




☆


Spicy/ Red Hot

7a. These children are facing SW and their teacher has told them to turn clockwise and then a greater turn anti-clockwise to face W.


 Daniel: We need to make a $\frac{3}{8}$ turn and then a right angle.


 Hafash: We need to make a 45° turn and then a whole turn.

Who do you agree with? Explain.




7b. These children are facing NE and their teacher has told them to turn clockwise and then a greater turn anti-clockwise to face W.

 Kyle: We need to turn 135° and then an acute angle anti-clockwise.

 Hattie: We need to make a $\frac{3}{8}$ turn and then a reflex angle.

Who do you agree with? Explain.




8a. Which of the following cards could be used to complete the statement? Give all of the possible answers.

N **NE** **W** **NW**

S **SE** **E** **SW**

A 405° turn > turning from _____ to NE > a $\frac{3}{8}$ turn anti-clockwise




8b. Which of the following cards could be used to complete the statement? Give all of the possible answers.

N **NE** **E** **NW**


S **SW** **SE** **W**


A 135° turn < turning from _____ to SW > a $\frac{1}{8}$ turn clockwise



9a. Starting at 18:47, the minute hand makes more than 6 but fewer than 9 twelfth turns.

What times could the clock show after the turns?





9b. Starting at 05:11, the minute hand makes more than 5 but fewer than 8 twelfth turns.

What times could the clock show after the turns?

