

Varied Fluency

Step 1: Measuring Angles in Degrees

National Curriculum Objectives:

Mathematics Year 5: (5G4a) [Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles](#)

Mathematics Year 5: (5G4b) [Identify angles at a point and one whole turn \(total 360\)](#)

Mathematics Year 5: (5G4b) [Identify angles at a point on a straight line and 1/2 a turn \(total 180\)](#)

Mathematics Year 5: (5G4b) [Identify other multiples of 90](#)

Mathematics Year 5: (5G4c) [Draw given angles, and measure them in degrees](#)

Differentiation:

Developing Questions to support measuring degrees around a point, including angles in increments of 90° . Using right angles and reflex angles. Clock faces and compasses used in quarter increments.

Expected Questions to support measuring degrees around a point, including angles in increments of 30° and 45° . Using acute, obtuse, reflex and right angles. Clock faces used in increments of twelve and compasses used in increments of eight.

Greater Depth Questions to support measuring degrees around a point, including some angles in increments of 30° and 45° . Using acute, obtuse, reflex and right angles. Clock faces used in increments of twelve and compasses used in increments of eight, where some or no increments are marked.

More [Year 5 Properties of Shapes](#) resources.

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Measuring Angles in Degrees

Measuring Angles in Degrees

1a. Label each image with the name of the angle.

A.  B. 

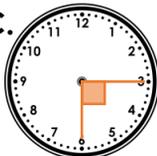
C.  D. 



VF

1b. Label each image with the name of the angle.

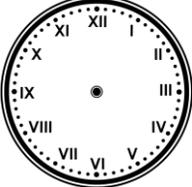
A.  B. 

C.  D. 



VF

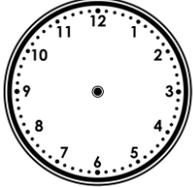
2a. Look at the time on the clock. Draw where the minute hand will be after a right angle turn anti-clockwise.



VF

2b. Look at the time on the clock. Draw where the minute hand will be after a 90° turn anti-clockwise.



VF

3a. How many degrees will I move through if I turn from N to W clockwise?



VF

3b. How many degrees will I move through if I turn from S to W clockwise?



VF

4a. How many $\frac{1}{4}$ turns are equal to 360° ?



VF

4b. How many $\frac{1}{4}$ turns are equal to 270° ?



VF

5a. Use $>$, $<$ or $=$ to complete the equation.

180° $\frac{2}{4}$ turn



VF

5b. Use $>$, $<$ or $=$ to complete the equation.

$\frac{3}{4}$ turn 360°

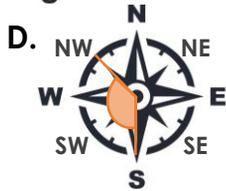
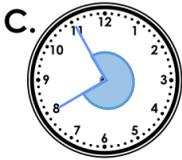
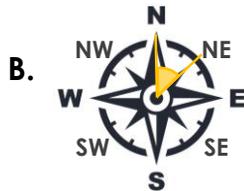
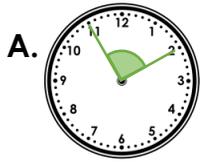


VF

Measuring Angles in Degrees

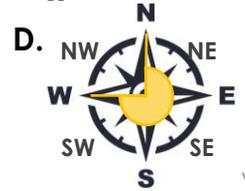
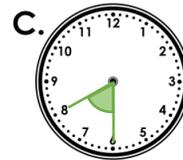
Measuring Angles in Degrees

6a. Label each image with the name of the angle.



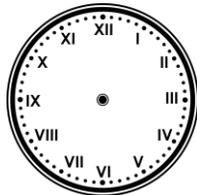
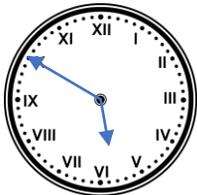
VF

6b. Label each image with the name of the angle.



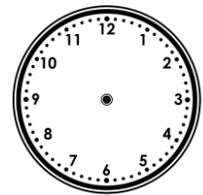
VF

7a. Look at the time on the clock. Draw where the minute hand will be after a 270° turn clockwise.



VF

7b. Look at the time on the clock. Draw where the minute hand will be after a 90° turn anti-clockwise.



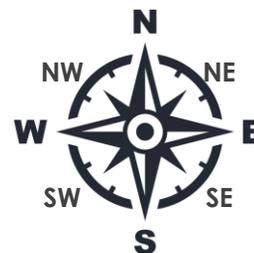
VF

8a. How many degrees will I move through if I turn from NE to N anti-clockwise?



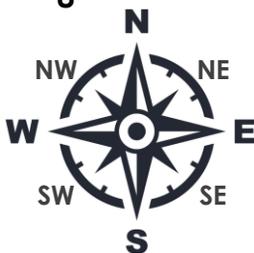
VF

8b. How many degrees will I move through if I turn from SW to N clockwise?



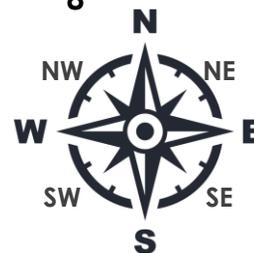
VF

9a. How many $\frac{1}{8}$ turns are equal to 180°?



VF

9b. How many $\frac{1}{8}$ turns are equal to 270°?



VF

10a. Use $>$, $<$ or $=$ to complete the equation.

$$135^\circ \quad \square \quad \frac{3}{8} \text{ turn}$$



VF

10b. Use $>$, $<$ or $=$ to complete the equation.

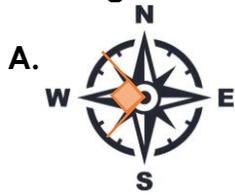
$$180^\circ \quad \square \quad \frac{3}{4} \text{ turn}$$



VF

Measuring Angles in Degrees

11a. Label each image with the name of the angle.



B. Minute hand moves from 5 to 15 clockwise

C. Minute hand moves from 4 to 9 clockwise.

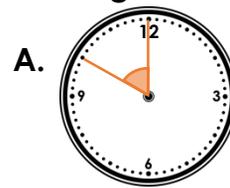
D. SW to N clockwise



VF

Measuring Angles in Degrees

11b. Label each image with the name of the angle.



B. Minute hand moves from 7 to 12 clockwise.

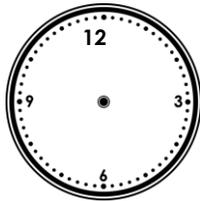
C. SW to NW anti-clockwise

D. SE to NE anti-clockwise



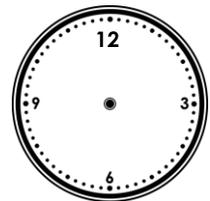
VF

12a. Look at the time on the clock. Draw where the minute hand will be after a 120° turn clockwise and $\frac{3}{4}$ turn anti-clockwise.



VF

12b. Look at the time on the clock. Draw where the minute hand will be after a 270° turn anti-clockwise and $\frac{1}{4}$ turn clockwise.



VF

13a. How many degrees will I move through if I turn from NE to N anti-clockwise and N to SW clockwise?



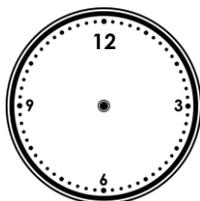
VF

13b. How many degrees will I move through if I turn from SE to N clockwise and N to S anti-clockwise?



VF

14a. How many $\frac{1}{12}$ turns are equal to 270° ?



VF

14b. How many $\frac{1}{8}$ turns are equal to 180° ?



VF

15a. Use $>$, $<$ or $=$ to complete the equation.

270° $\frac{3}{4}$ turn acute angle



VF

15b. Use $>$, $<$ or $=$ to complete the equation.

135° $\frac{1}{8}$ turn reflex angle



VF

Varied Fluency
Measuring Angles in Degrees

Developing

1a. A – right angle; B – right angle; C – reflex; D – reflex

2a. 6

3a. 270°

4a. 4 turns

5a. =

Expected

6a. A – right angle; B – acute angle; C – reflex angle; D – obtuse angle

7a. 7

8a. 45°

9a. 4 turns

10a. =

Greater Depth

11a. A – right angle; B – acute angle; C – obtuse angle; D – obtuse angle

12a. 8

13a. 270°

14a. 9 turns

15a. =, >

Varied Fluency
Measuring Angles in Degrees

Developing

1b. A – reflex angle; B – right angle; C – right angle; D – reflex angle

2b. 9

3b. 90°

4b. 3 turns

5b. <

Expected

6b. A – obtuse; B – right angle; C – acute angle; D – reflex angle

7b. 2

8b. 135°

9b. 6 turns

10b. <

Greater Depth

11b. A – acute angle; B – obtuse angle; C – reflex angle; D – right angle

12b. 1

13b. 405°

14b. 4 turns

15b. >, <