

WA5MMGTW5

Two-dimensional space and structures

Core + Challenge

NAPLAN-style

Classifying Angles

I can name acute, right, obtuse, straight and reflex angles and compare angles to a right angle.

Name: _____ Date: _____ Score: _____ / 56

Key idea

An **angle** is the amount of turn between two arms that meet at the **vertex**. A full turn is **360°**.

Acute: less than 90°. **Right:** exactly 90°, marked with a small square. **Obtuse:** more than 90° but less than 180°.

Straight: exactly 180° (the arms make a straight line). **Reflex:** more than 180° but less than 360°.

Compare with a right angle (the corner of a page): smaller is acute; bigger is obtuse, straight or reflex.

Acute



Right



Obtuse



Straight



Reflex



A

Warm up *tick, name and estimate*

/ 16 marks

Tick the box that names each angle. The arc shows which angle to look at. 1 mark each.

1



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

2



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

3



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

4



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

5



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

6



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

7



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

8



- ☐ acute ☐ straight
☐ right ☐ reflex
☐ obtuse

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Name the angle the clock hands make (the **smaller** angle between them). 1 mark each.

9 2 o'clock



10 4 o'clock



11 9 o'clock



12 6 o'clock



Circle the **best estimate** for each angle. 1 mark each.

13



40° 100° 140°

14



50° 90° 130°

15



20° 95° 165°

16



140° 220° 320°

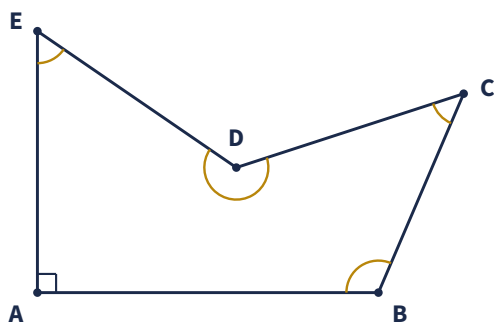
B

Practise use the skill

/ 21 marks

- 1 Name the type of angle **inside** the shape at each corner. Write acute, right, obtuse or reflex in the table.

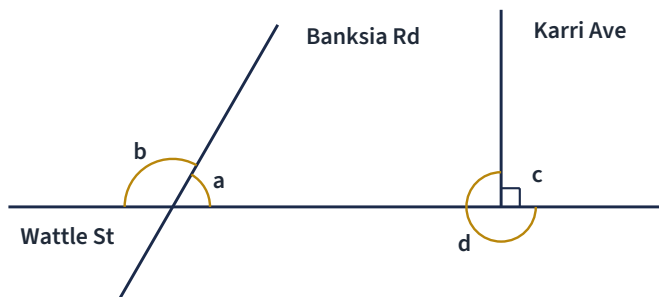
[3 marks]



Corner	Type of angle
A	
B	
C	
D	
E	

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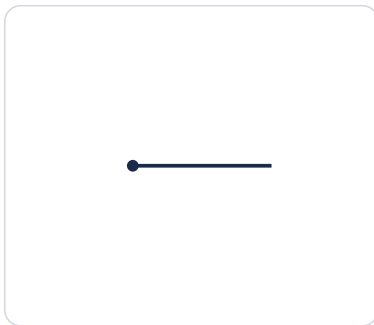
- 2 This map shows three streets in Piara Waters. Name the type of each marked angle a, b, c and d. [2 marks]



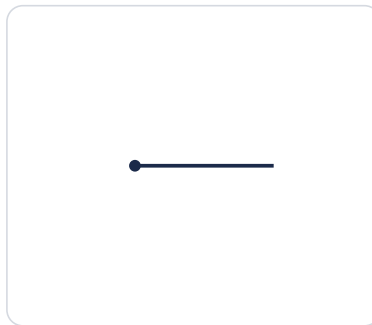
a _____
b _____
c _____
d _____

- 3 Draw one angle of each type from the arm given. Mark each angle with an arc. [3 marks]

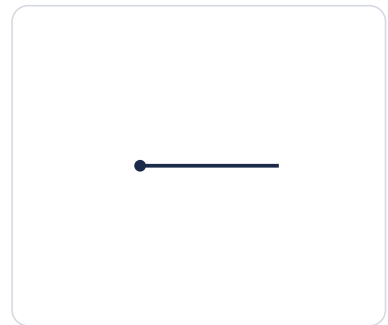
Acute



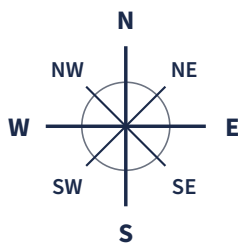
Obtuse



Reflex



- 4 Ella faces **north**. She turns **clockwise** until she faces each direction below. What type of angle has she turned through each time? [2 marks]



East: _____

South-east: _____

North-east: _____

West: _____

- 5 Draw a line to join each type of angle to a size that matches it. [2 marks]

acute •

• 180°

right •

• 35°

obtuse •

• 300°

straight •

• 90°

reflex •

• 115°

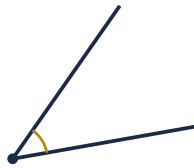
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- 6 Write the angles in order from **smallest** to **largest**. Be careful: longer arms do **not** make a bigger angle. [2 marks]

A



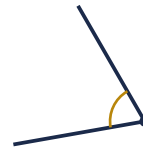
B



C



D



Answer: _____

- 7 a) Which angle is **reflex**? Circle it. b) Which angle is **acute**? Circle it. [2 marks]

a)

95°

175°

190°

90°

b)

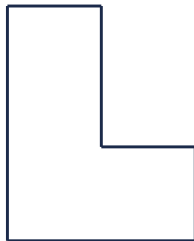
91°

89°

180°

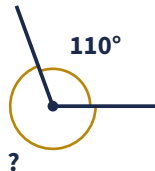
100°

- 8 This is the plan of a garden bed. a) How many **right** angles are inside the shape? b) How many **reflex** angles? [2 marks]



Answer: _____

- 9 a) Two angles sit together on a straight line. One is 40°. How big is the other, and what type is it? b) Together, an angle of 110° and another angle make a full turn. How big is the other angle, and what type is it? [3 marks]



Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Zoe says, "This angle is obtuse." Do you agree with Zoe? Explain.

[2 marks]



- 2 **True or false?** "If you cut an obtuse angle exactly in half, each half is acute." Explain.

[2 marks]

- 3 **Always, sometimes or never true?** "A reflex angle and an acute angle together make a full turn." Circle one and give examples.

[2 marks]

Always

Sometimes

Never

- 4 Which is the **odd one out**? 35° , 89° , 91° , 65° . Explain.

[2 marks]

- 5 Sort these angles into the table: 45° , 95° , 190° , 300° , 10° , 170° , 250° , 89° . One box stays empty. Explain why.

[2 marks]

	Less than 180°	More than 180°
Less than 90°		
More than 90°		

D**Challenge** *stretch yourself*

/ 9 marks

- 1 Think about the times **1 o'clock**, **2 o'clock**, **3 o'clock** and so on, up to **11 o'clock**. Sort them by the type of the **smaller** angle between the hands. What happens at 12 o'clock? [3 marks]

Acute	Right	Obtuse	Straight

- 2 A minute hand turns **360°** in 60 minutes, so it turns **6°** each minute. Kai's footy training runs from **4:00** to **4:45**. His sister's netball runs from **4:00** to **4:20**. How many degrees does the minute hand turn during each? Name each type of angle. [3 marks]



Answer: _____

- 3 **Find all the possibilities.** Choose from the angles 45° , 90° , 135° , 180° , 225° , 270° and 315° . Find **every** pair that makes a **full turn** (360°). You may use the same angle twice. Name the type of each angle in each pair. What do you notice? [3 marks]

Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 21 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 56**Want help with Year 5 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**