

UNIT 5 Angles

Mental Tests

M 5.1 Standard Route (no calculator)

- How many degrees are there in (a) $\frac{1}{2}$ turn, (b) $\frac{1}{4}$ turn? ((a) 180° (b) 90°)
- You are facing east and make a $\frac{1}{4}$ turn clockwise.
In which direction are you now facing? (south)
- What fraction of a turn takes you clockwise from west to south? ($\frac{3}{4}$ turn)
- How many degrees are there between: (a) south and north, (180°)
(b) south and west? (90°)
- You are facing due west and turn clockwise through an angle of 45° .
In which direction are you now facing? (northwest (NW))
- How many degrees are there in an anticlockwise turn between north and northwest? (45°)
- Is an angle of size 120° , *acute*, *obtuse* or *reflex*? (obtuse)
- How many degrees are there around a point? (360°)

M 5.2 Standard Route (no calculator)

- How many degrees are there in (a) whole turn, (b) $\frac{3}{4}$ turn? ((a) 360° (b) 270°)
- You are facing west and make a $\frac{1}{4}$ turn anticlockwise.
In which direction are you now facing? (south)
- What fraction of a turn takes you clockwise from east to south? ($\frac{1}{4}$ turn)
- How many degrees are there between: (a) east and west, (180°)
(b) north and east? (90°)
- You are facing due south and turn anticlockwise through an angle of 45° .
In which direction are you now facing? (southeast (SE))
- How many degrees are there in a clockwise turn between south and northwest? (135°)
- Is an angle of size 210° , *acute*, *obtuse* or *reflex*? (reflex)
- How many degrees are there around a point on a straight line? (180°)

UNIT 5 Angles

Mental Tests

M 5.3 Academic and Express Route *(no calculator)*

- Two angles round a point have sizes 120° and 160° .
What is the size of the third angle? (80°)
- What is the sum of the interior angles of a triangle? (180°)
- Two angles in a triangle are 40° and 80° . What is the size of the other angle? (60°)
- What is the size of any angle in an equilateral triangle? (60°)
- What two facts can you state about the angles in an isosceles triangle? (two equal angles,
two equal sides)
- The unequal angle in an isosceles triangle is of size 40° .
What is the size of the other angle? (70°)
- What are the sizes of the angles in a right angled isosceles triangle? (90° , 45° , 45°)
- In an isosceles triangle, the two equal angles are of size 42° .
What is the size of the other angle? (96°)
- What is the size of each of the interior angles of a square? (90°)

M 5.4 Academic and Express Route *(no calculator)*

- Two angles round a point have sizes 100° and 150° .
What is the size of the third angle? (110°)
- What is the sum of the interior angles of a triangle? (180°)
- Two angles in a triangle are 50° and 70° . What is the size of the other angle? (60°)
- What can you say about the lengths of the sides of an isosceles triangle? (two are of equal length)
- What two facts can you state about the angles in an equilateral triangle? (angles all equal;
angles equal 60°)
- The unequal angle in an isosceles triangle is of size 80° .
What is the size of the other angle? (50°)
- In a right angled triangle, one angle is of size 35° .
What are the sizes of the other two angles? (90° , 55°)
- In an isosceles triangle, the two equal angles are of size 54° .
What is the size of the other angle? (72°)
- What is the size of each of the interior angle of a rectangle? (90°)