Revision & Practice Worksheet 24

A Cartesian plane: Plotting cubic equations

Skill 5.10

Generate a set of points for these cubics and plot them on a set of axes:

1 $y = \frac{1}{2}x^3 - 4$

x	–2	–1	0	1	2
y					

2 $y = 1 + x - x^3$

x	–2	–1	0	1	2
y					

3 $y = 2x^3 - 5x$

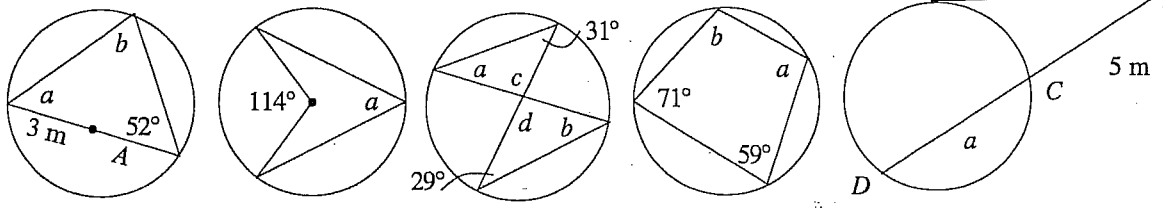
x	–2	–1	0	1	2
y					

B Geometry: Properties of circles

Skill 6.3

Find the missing sides or angles:

1 2 3 4 5



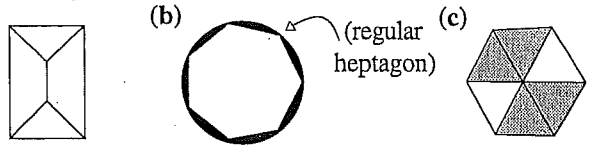
C Geometry: Symmetrical properties of plane shapes

Skill 6.4

1 List the first ten letters of the alphabet and show any axes of symmetry

2 Identify the angle through which these shapes need to be rotated to show that they have rotational symmetry. Which of these have point symmetry?

(a) (b) (regular heptagon) (c)

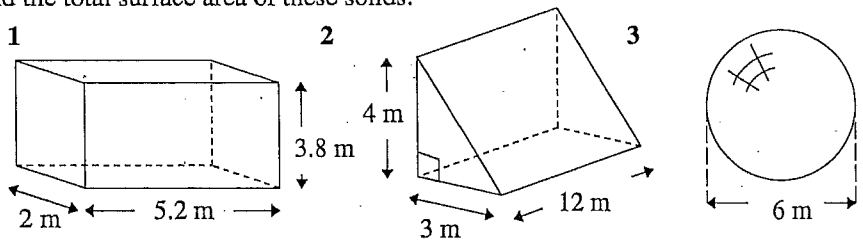


D Measurement: Surface area of solids

Skill 7.7

Find the total surface area of these solids:

1 2 3

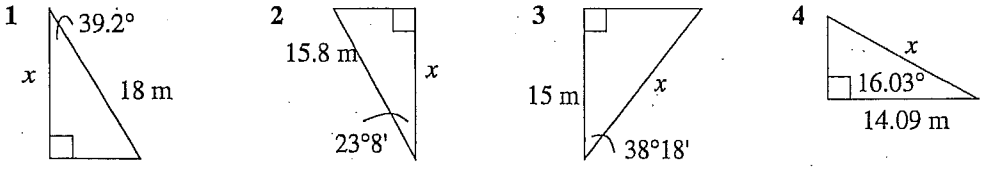


E Trigonometry: Using cos to find side lengths

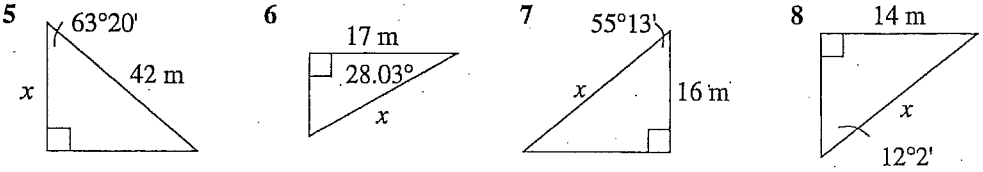
Skill 8.2

Find the missing lengths:

1 2 3 4

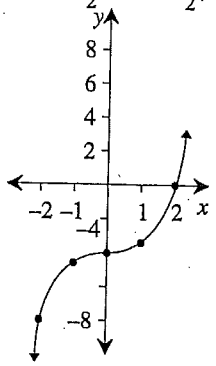


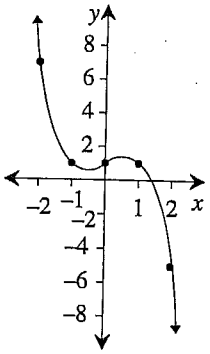
5 6 7 8



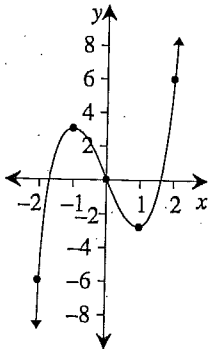
Worksheet 24

A **1** $(-8, -4\frac{1}{2}, -4, -3\frac{1}{2}, 0)$ **2** $(7, 1, 1, 1, -5)$





3 $(-6, 3, 0, -3, 6)$



B **1** $a = 38°$
$b = 90°$
$A = 3$ m

2 $a = 57°$

3 $a = 29°$
$b = 31°$
$c = d = 120°$

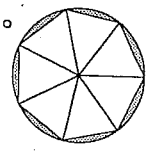
4 $a = 109°$
$b = 121°$

5 $A = 9.8$ m

C **1** **ABCDEFGHIJ**

AB C D E H I

2 **(a)** 180° point symmetry **(b)** $51\frac{3}{7}°$



(c) 180° point symmetry

D **1** 75.52 m² **2** 96 m² **3** 113.10 m²

E **1** 13.95 m **2** 14.53 m **3** 19.11 m
4 14.66 m **5** 18.85 m **6** 19.26 m
7 28.05 m **8** 14.31 m