Round to Sig Figs

Question 1:

(a) 40 (b) 20 (c) 80 (d) 70 (e) 100 (f) 100 (g) 500

(h) 300 (i) 700 (j) 900 (k) 400 (l) 700 (m) 100 (n) 1000

(o) 4000 (p) 5000 (q) 4000 (r) 3000 (s) 6000 (t) 8000 (u) 6000

Question 2:

(a) 10000 (b) 50000 (c) 70000 (d) 80000 (e) 100000 (f) 300000

(g) 900000 (h) 200000 (i) 500000 (j) 10000000

Question 3:

(a) 3 (b) 3 (c) 6 (d) 50 (e) 60 (f) 80 (g) 90

(h) 100 (i) 8 (j) 10 (k) 70 (l) 6000 (m) 50 (n) 100

Question 4:

(a) 0.5 (b) 0.9 (c) 0.2 (d) 0.05 (e) 0.09 (f) 0.007 (g) 0.004

(h) 0.06 (i) 0.9 (j) 0.0006 (k) 0.001 (l) 0.00003

Question 5:

(a) 840 (b) 670 (c) 130 (d) 2800 (e) 9300 (f) 1400 (g) 300

(h) 500 (i) 1000 (k) 3800 (k) 49000 (l) 14 (m) 58 (n) 50

(o) 1.4 (p) 43 (q) 0.32 (r) 22000 (s) 190000 (t) 0.049 (u) 5.0 (5)

(v) 1000000 (w) 3.0 (3) (x) 0.060 (0.06)

Percentages

Question 1: £4410

Question 2: 26620

Question 3: £9025

Question 4: £2105.74 or £2105.75

Question 5: 149.609 litres

Question 6: 419.4 cm or 4.194 m

Speed Distance Time

Question 1

(a) 0.25 (b) 0.5 (c) 0.75 (d) 0.33333…

(e) 0.6666… (f) 2.5 (g) 1.25 (h) 3.75

(i) 2.6666…. (j) 5.5 (k) 7.333… (l) 4.25

Question 2

(a) 0.3 (b) 0.9 (c) 1.05 (d) 1.6

(e) 1.8 (f) 2.55 (g) 8.85 (h) 3.35

(i) 0.45

Question 3

(a) 0.733 (b) 0.133 (c) 1.833 (d) 2.167

(e) 4.433 (f) 3.483 (g) 5.033 (h) 2.917

(i) 0.983

Question 4

(a) 45 min (b) 1 hr 15 min (c) 5hr 30 min (d) 1 hr 20 min

(e) 2 hr 40 min (f) 10 hr 45 min (g) 3 hr 15 min (h) 30 min

(i) 22 hr 20 min

Question 1

(a) 30mph (b) 40mph (c) 9mph (d) 7.5km/h

(e) 10m/s (f) 65mph (g) 85mph (h) 120mph

(i) 18m/s (j) 164mph (k) 9.5mph (l) 75km/h

Question 2

(a) 40mph (b) 64mph (c) 34km/h (d) 8km/h

(e) 72mph (f) 128mph (g) 18km/h (h) 230mph

(i) 36mph (j) 45mph (k) 54mph (l) 36km/h

Statistics

Median and IQR

1	$L = 2, H = 12, Q1 = 7, Q2 = 7, Q3 = 10, IQR = 6$
2	$L = 13, H = 21, Q1 = 14, Q2 = 15, Q3 = 18, IQR = 4$
3	$L = 11, H = 25, Q1 = 12, Q2 = 18, Q3 = 22, IQR = 10$
4	$L = 1, H = 11, Q1 = 2, Q2 = 7, Q3 = 9, IQR = 7$
5	$L = 25, H = 58, Q1 = 35.5, Q2 = 52, Q3 = 55.5, IQR = 20$
6	$L = 33, H = 54, Q1 = 37, Q2 = 49, Q3 = 51, IQR = 14$

Mean and SD

1	$\bar{x} = 18, sd = 3.35$
2	$\bar{x} = 8, sd = 2.58$
3	$\bar{x} = 3.6,\ \text{sd} = 1.56$
4	$\bar{x} = 108, sd = 3.4$
5	$\bar{x} = 55, sd = 5.6$
6	$\bar{x} = 2, sd = 1.15$

Probability

1. a) $\frac{3}{5}$ b) $\frac{1}{5}$ 2. a) $\frac{1}{3}$ b) $\frac{1}{2}$ c) $\frac{1}{3}$ 3. a) $\frac{1}{4}$ b) $\frac{3}{4}$ c) $\frac{1}{16}$ d) $\frac{11}{16}$ 4. a) $\frac{3}{10}$ b) $\frac{1}{4}$ 5.a) $\frac{1}{3}$ b) $\frac{5}{8}$

Volume

1) 29900 cm^3 2) 140 cm^3 3) 4180mm^3 4) 550cm^3

Algebra

Expanding brackets

Question 1

(a) 5y + 15 (b) 4a + 8 (c) 8w + 80 (d) 3x – 21

(e) 9s – 9 (f) 16 – 2t (g) 28 + 7h (h) 10a + 20b + 30c

(i) 12y + 8 (j) 10p -5 (k) 21a + 6 (l) 18x – 45

(m) 20 + 15t (n) 63 – 14c (o) 24w + 8 (p) 9 – 36p

(q) 22k – 55 (r) 120a + 100c (s) 45w – 21 (t) 27 – 6a

Question 5:

(a) 7y + 29 (b) 21w + 48 (c) 11y + 14 (d) 9g + 11

(e) 2x + 20 (f) -4y – 11 (g) 55 + 7m (h) 26

(i) 18 + 15y

Factorising

Question 1

(a) 2(2x + 3) (b) 5(3x + 4) (c) 3(3y – 4) (d) 5(x + 3)
(e) 3(2x – 1) (f) 4(x + 2) (g) 5(y – 5) (h) 8(w + 3)

Question 2
(a) x(x + 7) (b) x(x – 3) (c) y(y + 1) (d) w(w + 9)
(e) x(x – 7) (f) 2w(2w + 5) (g) 2x(3x – 4) (h) 3y(3y – 2)

Solving Equations

(a) x = 3 (b) w = 5 (c) y = 4 (a) x = 3 (b) x = 6 (c) x = 4 (d) x = 9

(d) x = 3 (e) c = 10 (f) m = 3 (e) x = 4 (f) x = 17 (g) x = 8 (h) x = 1

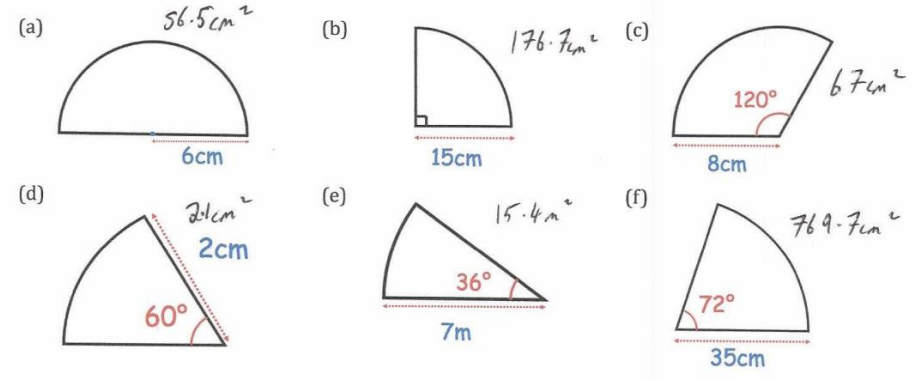
(g) w = 11 (h) p = 4 (i) I = 8 (i) x = 4

(j) a = 6 (k) x = 12 (l) w = 0

Arc Length and Sector Area

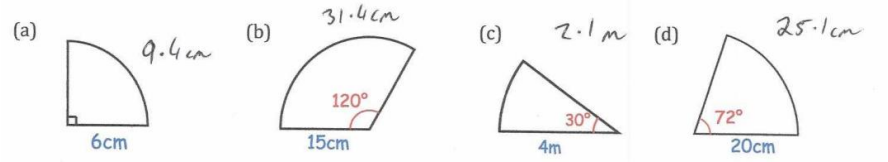
Sector Area

Question 1: Calculate the area of each of the following sectors.
Give each answer to one decimal place and include units.

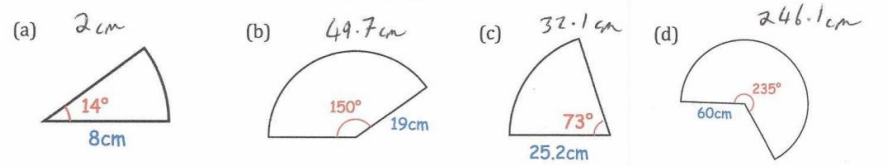


Arc Length

Question 1: For each sector below, calculate the length of the arc.
Give your answers to one decimal place and include suitable units.



Question 2: For each sector below, calculate the length of the arc.
Give your answers to one decimal place and include suitable units.



Gradient

Question 1:

(a) 2 (b) 1 (c) 3

(d) $\frac{1}{2}$ (e) 5 (f) -2

Money

Hire Purchase

1) £85 2) £540 3) £177.50 4) £127.50

Foreign Exchange

Question 1: €1400

Question 2: £340

Question 3: €1.25 or £1

Ratio

1) 5:8 2) 12 women 3) Alex = £100, James = £ 60 4) 9:6:5 5) 27000

Similarity

a)	16cm	b)	12cm	c)	3cm	d)	9cm
e)	45cm	f)	2.5cm				

Area

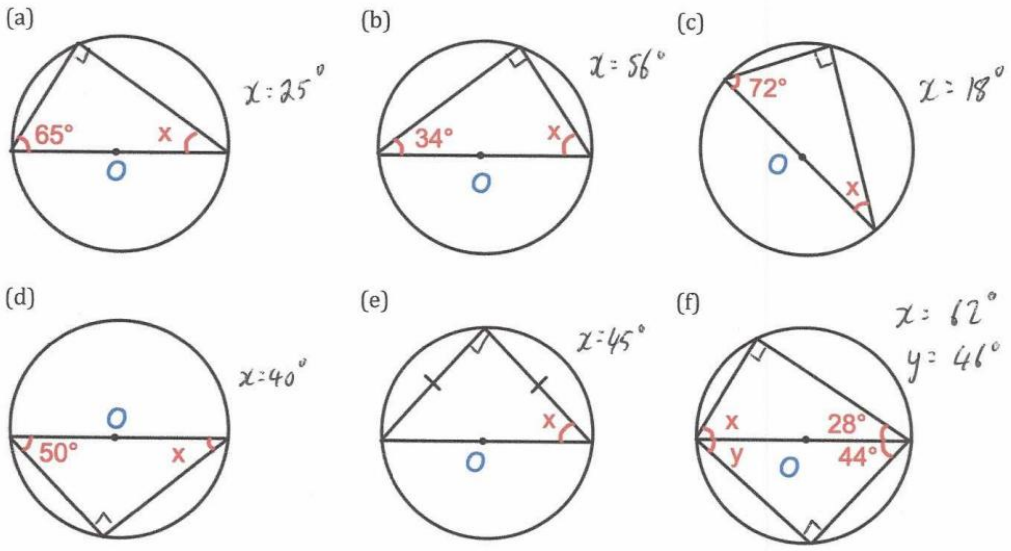
Question 3(a): $45cm^2$
Question 3(b): $320cm^2$
Question 3(c): $15cm^2$
Question 3(d): $144cm^2$

Volume

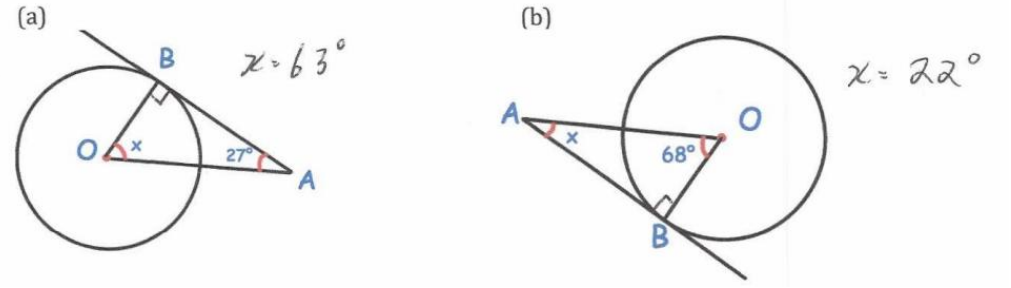
Question 3(a): $540cm^3$
Question 3(b): $312.5cm^3$
Question 3(c): $80cm^3$
Question 3(d): $4160mm^3$

Angles in a circle

Question 1: Find the missing angles labelled in each of these circles

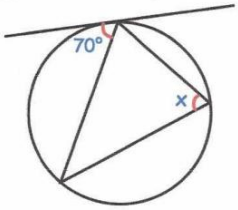


Question 10: Find the value of x in each diagram. The lines AB and AC are tangents.

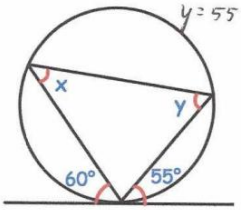


Question 13: Find the missing angles labelled in each of these circles

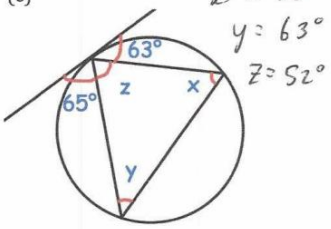
(a) $x = 70°$



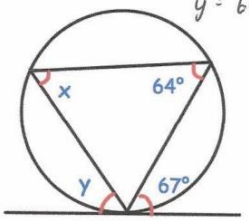
(b) $x = 60°$ $y = 55°$



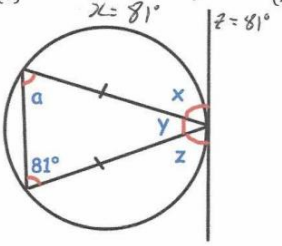
(c) $x = 65°$ $y = 63°$ $z = 52°$



(d) $x = 67°$ $y = 64°$



(e) $a = 81°$ $y = 18°$ $x = 81°$ $z = 81°$



(f) $x = 80°$ $y = 160°$ $z = 10°$