Contents

1a) Use a protractor to measure each angle.
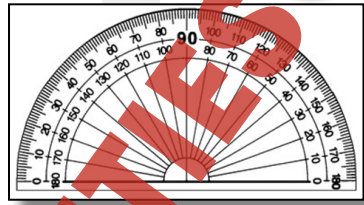
Ex:

120°

i) ii) iii) iv) v)

vi) vii) viii) ix)

x) xi) xii) xiii)

xiv) xv) xvi) xvii)

Reflection Why would an architect or engineer need to know how to measure angles?

_____

13a) Identify each type of line as a line, line segment, or ray.
Line: a straight line that goes on forever in both directions
Line segment: part of a line that has two endpoints
Ray: a straight line that goes on forever in one direction

i) _____   ii) _____   iii) _____

b) Identify each pair of lines below as parallel, perpendicular, skew, or intersecting.
Parallel: lines that maintain the same distance apart and never cross
Perpendicular: lines that cross at a 90° angle
Skew: lines that are not parallel and never cross
Intersecting: lines that cross, but not at a 90° angle

Ex:

parallel

i) ii)

iii) iv) v)

vi) vii) viii)

c) Draw the following types of lines.

Ex: **Parallel**   i) Intersecting   ii) Skew

iii) Perpendicular   iv) Skew   v) Parallel

vi) Intersecting   vii) Perpendicular   viii) Intersecting

Minutes

5a) Find the area of each quadrilateral.

Formula: Area = base x height

Ex: base = 3   Area = 3 × 3
      height = 3   Area = 9 units square

i) 5.3 / 5.3

ii) 2.5 / 5.2

iii) 2.3 / 3.4

Area = _____   Area = _____   Area = _____

iv) 3.3 / 3.3

v) 4.6 / 4.6

vi) 2.4 / 2.4

Area = _____   Area = _____   Area = _____

vii) 6.2 / 2.6

viii) 1.1 / 1.4

ix) 4.1 / 4.4

Area = _____   Area = _____   Area = _____

x) 6.6 / 6.6

xi) 6.5 / 6.5

xii) 5.6 / 3.1

Area = _____   Area = _____   Area = _____

xiii) 1.3 / 1.3

xiv) 6.4 / 3.6

xv) 4.3 / 4.3

Area = _____   Area = _____   Area = _____

Explore With Technology With the help of an adult, use the Internet to find Web Sites that find the area of different and unusual shapes. What unusual shapes did you find? How does the formula to find the area compare to that of squares and rectangles?

Minutes

12a) Find the diameter for each circle.   Formulas: diameter = 2 × radius
diameter = circumference ÷ π (π = 3.14)

Ex: **Circle with radius of 3.**   i) Circle with circumference of 6.
     Diameter = 2 × 3
     = 6 units

ii) Circle with radius of 5.   iii) Circle with circumference of 10.

iv) Circle with circumference of 12. v) Circle with a radius of 4.

b) Find the radius for each circle.   Formula: radius = diameter ÷ 2

i) Circle with diameter of 3.   ii) Circle with diameter of 4.

iii) Circle with a diameter of 5.   iv) Circle with a diameter of 2.

v) Circle with a diameter of 3.3.   vi) Circle with a diameter of 4.1.

c) Find the circumference for each circle.   Formulas: circumference = 2 π × radius
circumference = π × diameter (π = 3.14)

i) Circle with a diameter of 2.   ii) Circle with a diameter of 6.

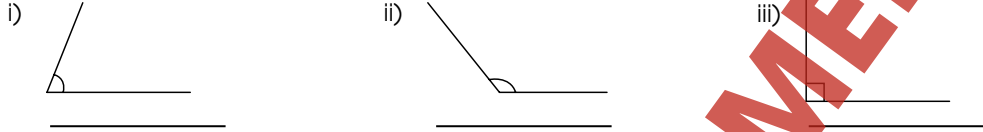iii) Circle with a diameter of 8.   iv) Circle with a radius of 1.

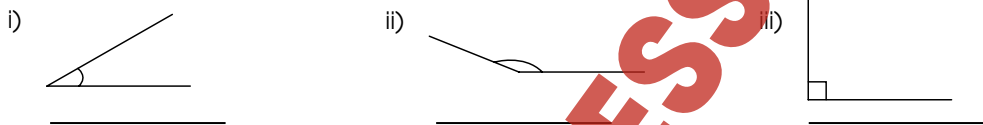v) Circle with a radius of 3.   vi) Circle with a radius of 5
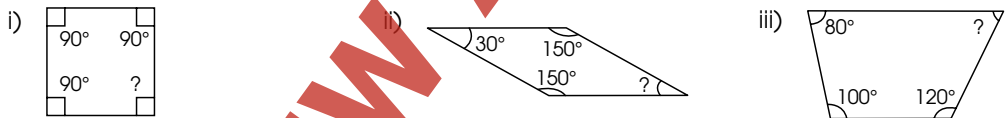
Review A

a) Measure each angle.

i)   ii)   iii)

_____ _____ _____

b) Identify each type of angle as acute, right, or obtuse.

i)   ii)   iii)

_____ _____ _____

c) Draw each angle.

i) 50 degree angle   ii) 95 degree angle   iii) 40 degree angle

d) Find the missing angle.

i) 90° 90° / 90° ?   ii) 30° 150° / 150° ?   iii) 80° ? / 100° 120°
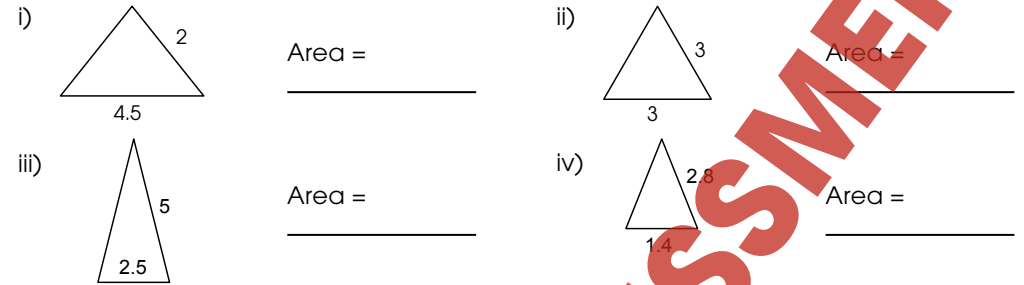
The missing angle is ____°   The missing angle is ____°   The missing angle is ____°

e) Find the area of each shape.

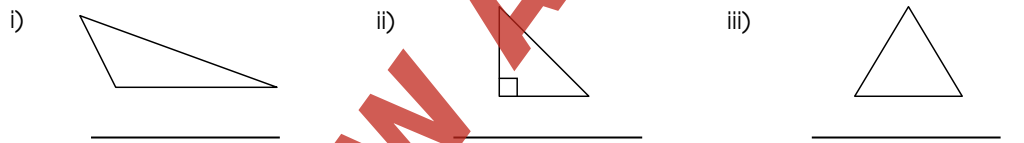i) 3.5   Area = _____   ii) 1.5 / 3   Area = _____

iii) 3.2   Area = _____   iv) 2 / 4.1   Area = _____
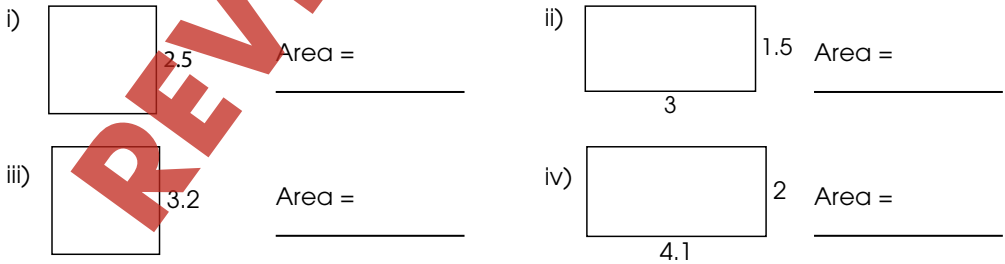
Review B

a) Find the area of each triangle.

i) 2 / 4.5   Area = _____   ii) 3 / 3   Area = _____

iii) 5 / 2.5   Area = _____   iv) 2.8 / 1.4   Area = _____

b) Describe each triangle by its sides as isosceles, scalene, or equilateral.

i)   ii)   iii)

_____ _____ _____
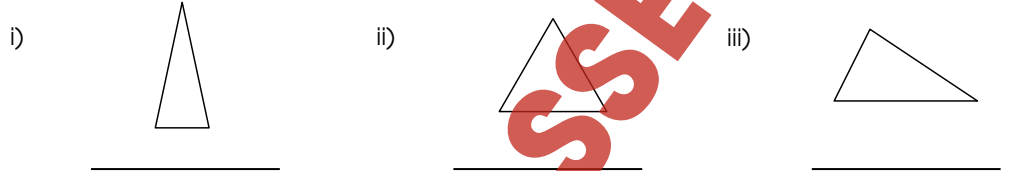
c) Describe each triangle by its angles as acute, right, or obtuse.

i)   ii)   iii)

_____ _____ _____

d) Find the missing angle.

i) 60° / ? 60°   ii) 100° / 40° ?   iii) 45° / 90° ?
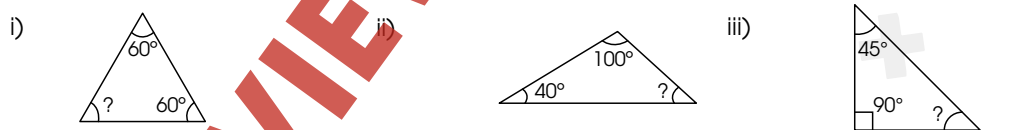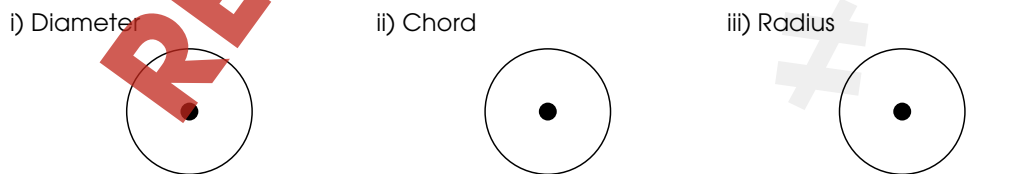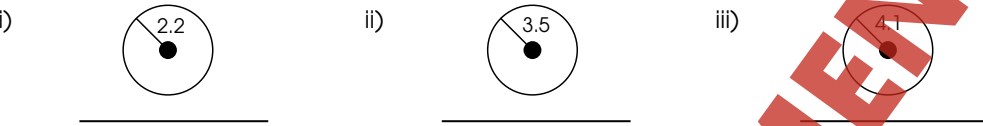
The missing angle is ____°   The missing angle is ____°   The missing angle is ____°

e) Draw the line on each circle.

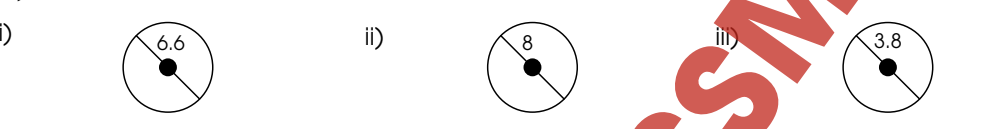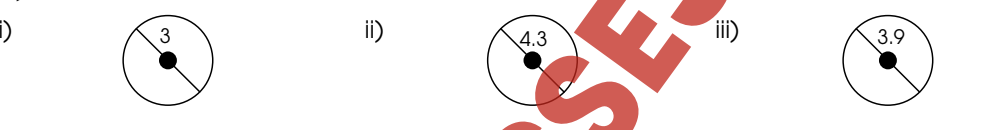i) Diameter   ii) Chord   iii) Radius

Review C

a) Find the diameter of each circle.

i) 2.2   ii) 3.5   iii)

_____ _____ _____

b) Find the radius of each circle.

i) 6.6   ii) 8   iii) 3.8

_____ _____ _____

c) Find the circumference of each circle.

i) 3   ii) 4.3   iii) 3.9

_____ _____ _____

d) Find the area of each circle.

i) 3   ii) 2.6   iii) 4.2

_____ _____ _____

e) Identify each line as a ray, line, or line segment.

i)   ii)   iii)

_____ _____ _____

f) Identify each pair of lines as skew, parallel, perpendicular, or intersecting.

i)   ii)   iii)   iv)

_____ _____ _____ _____
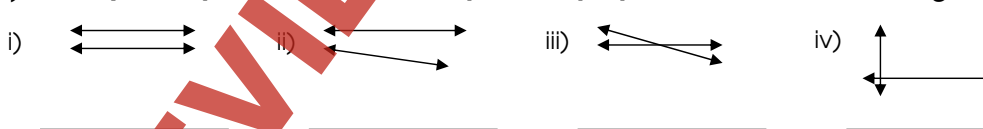
g) Find the volume for each shape.
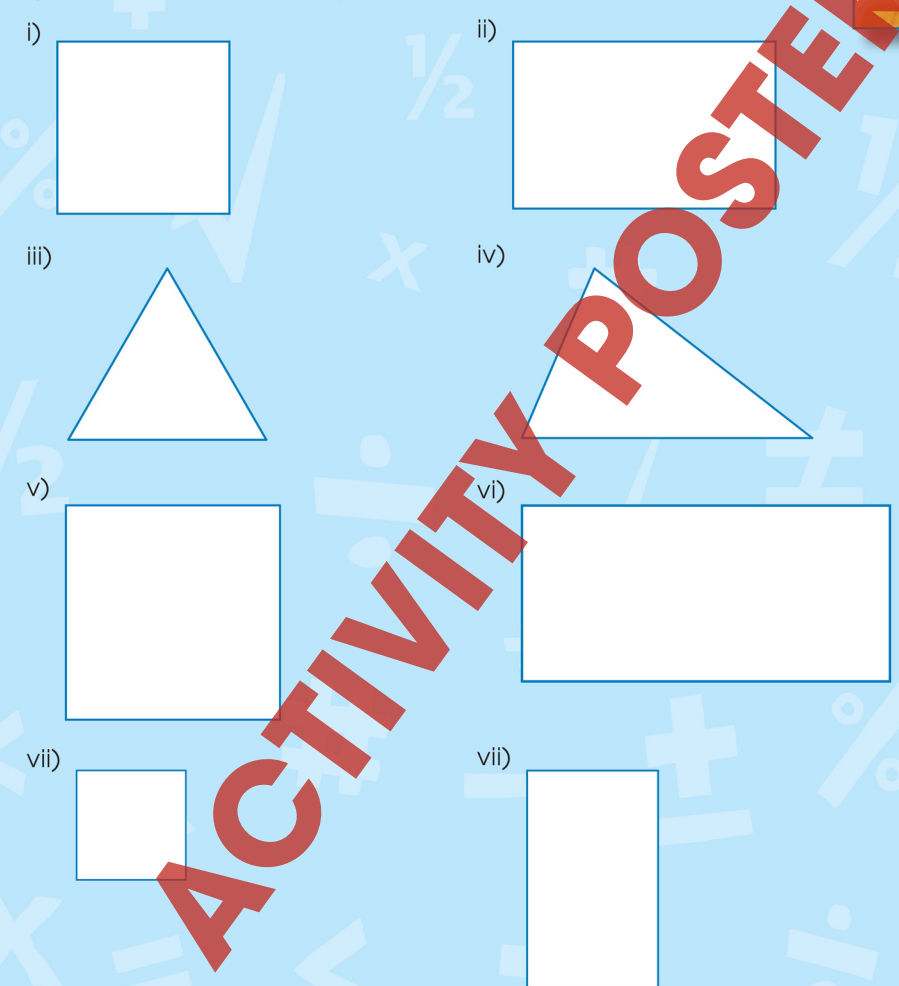
i) 4   ii) 4.5 / 3 4

_____   _____
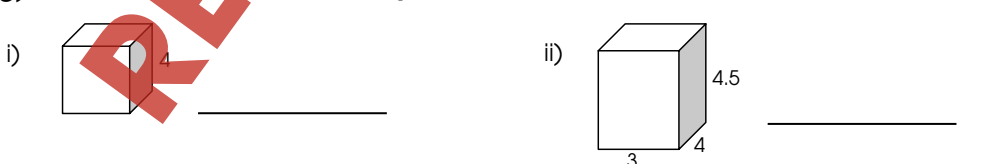
Similar Polygons

Similar polygons are the same shape but different sizes. The corresponding angles are congruent (the same) and all corresponding sides are proportional.
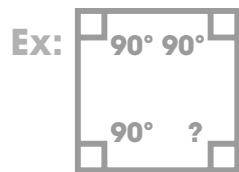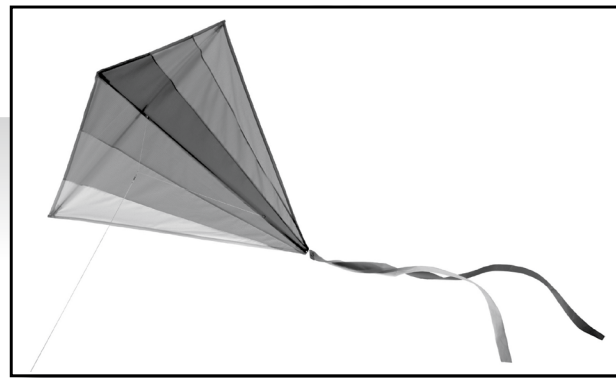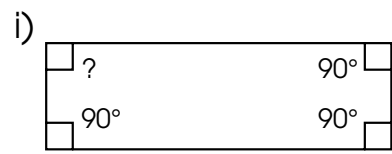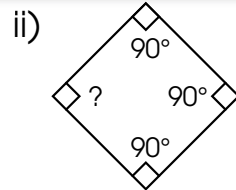
a) Draw the similar polygon for each shape.

i)   ii)

iii)   iv)

v)   vi)

vii)   vii)

4a) The angles on a quadrilateral have a sum of 360°. Find the missing angle on each quadrilateral.

Ex:
```
90° 90°
90°  ?
```
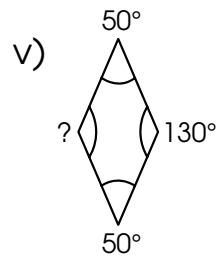
The missing angle is __90__ °
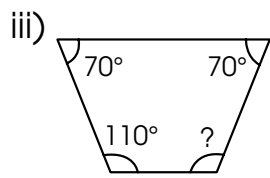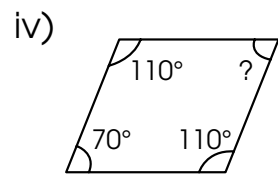
i)
```
?        90°
90°      90°
```
The missing angle is _____ °

ii)
```
90°
?    90°
90°
```
The missing angle is _____ °

iii)
```
70°      70°
110°     ?
```
The missing angle is _____ °

iv)
```
110°   ?
70°    110°
```
The missing angle is _____ °

v)
```
50°
?    130°
50°
```
The missing angle is _____

vi)
```
110° 100°
90°    ?
```
The missing angle is _____ °

vii)
```
115°
65°   65°
?
```
The missing angle is _____ °

viii)
```
95°      ?
90°    90°
```
The missing angle is _____ °

ix)
```
135° 110°
45°    ?
```
The missing angle is _____ °

x)
```
?    145°
90°   45°
```
The missing angle is _____ °
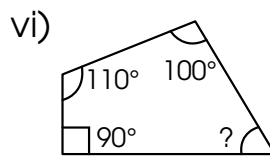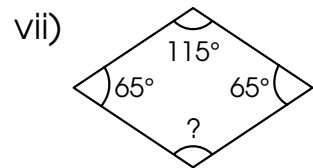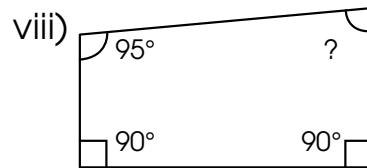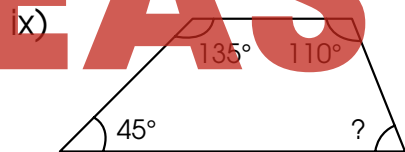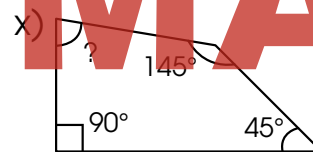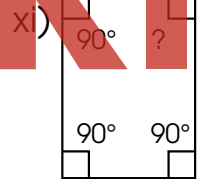
xi)
```
90°   ?
90°  90°
```
The missing angle is _____ °

b) Which shapes shown above have only right angles? _____

c) Which shapes have two acute angles? _____

d) Which shapes have three acute angles? _____

e) Are there any shapes with all acute angles? _____

f) Are there any shapes with all obtuse angles? _____

EASY MARKING ANSWER KEY

4.	5.	6.	7.
a)	**a)**	**a)**	**a)**
i) 90° ii) 90°	i) 28.09 units squared	i) 4.5 units squared	i) 1 unit squared
	ii) 13 units squared	ii) 13.125 units squared	ii) 2.94 units squared
	iii) 7.82 units squared	iii) 3 units squared	iii) 4.65 units squared
iii) 110° iv) 70°			
v) 130°	iv) 10.89 units squared	iv) 14 units squared	iv) 1.5 units squared
	v) 21.16 units squared	v) 5.5 units squared	v) 9.45 units squared
	vi) 5.76 units squared	vi) 7.5 units squared	vi) 3.795 units squared
			vii) 1.69 units squared
			viii) 3.15 units squared
vi) 60° vii) 115°		vii) 4.375 units squared	ix) 2.255 units squared
viii) 85°	vii) 16.12 units squared	viii) 7.5 units squared	
	viii) 1.54 units squared	ix) 2.25 units squared	
	ix) 18.04 units squared		
ix) 70° x) 80°			x) 1.75 units squared
xi) 90°			xi) 6.8 units squared
		x) 13.5 units squared	xii) 2.4 units squared
	x) 43.56 units squared	xi) 0.375 units squared	
	xi) 42.25 units squared	xii) 18 units squared	xiii) 5 units squared
	xii) 17.36 units squared		xiv) 1.38 units squared
			xv) 5.89 units squared
b)			
i), ii), xi)		xiii) 8.5 units squared	
c)		xiv) 21 units squared	xvi) 2.295 units
iii), iv), v), vi),	xiii) 1.69 units squared	xv) 12 units squared	squared
vii), ix), x)	xiv) 23.04 units squared		xvii) 6.75 units squared
d)	xv) 18.49 units squared		xviii) 6.125 units
none			squared
e)			
no			
f)			
no			
10	11	12	13