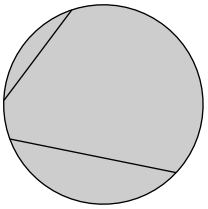
Name: _____ Date: _____

10.2 Exploring Chord Properties

2. Explain how to find the centre of the circle using these 2 chords.



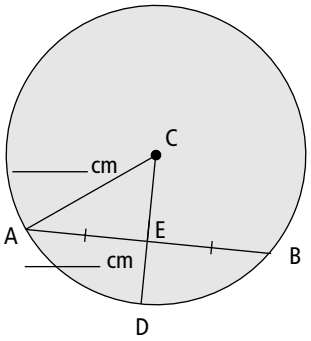
Step 1: _____

Step 2: _____

Step 3: _____

Practise

3. CD bisects chord AB.
Radius = 15 cm
Chord AB = 24 cm
What is the length of CE?



Label the diagram with the measurements you know.

Chord AB = _____, so AE = _____

Formula →

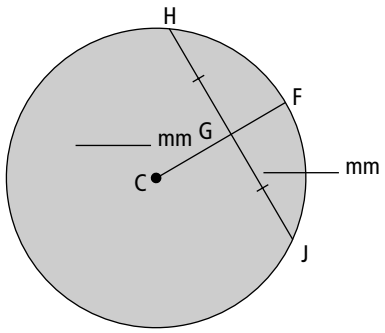
Substitute →

Solve →

The length of CE is _____ cm.

Name: _____ Date: _____

4. The radius CF bisects chord HJ.
CG = 4 mm
Chord HJ = 14 mm
What is the radius of the circle to the nearest tenth of a millimetre (1 decimal place)?



Draw a line from C to J.
Write the measurements on the diagram.

Formula →

Substitute →

Solve →

The radius of the circle is _____ mm.

5. Hannah wants to draw a circle at the centre of her trampoline.
Explain how she can find the centre.
Use the diagram to help you.

_____

_____

_____

_____

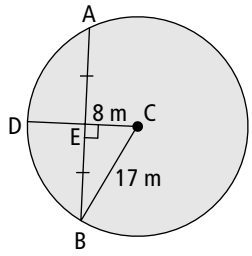
_____

_____

Name: _____ Date: _____

Apply

6. The radius of the circle is 17 m.
The radius CD is perpendicular to the chord AB.
CE measures 8 m.
What is the length of chord AB?



Are AE and BE equal? Circle YES or NO.

First, find the length of BE.

Formula →

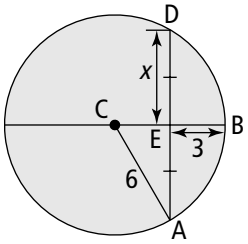
Substitute →

Solve →

AB = 2 × BE

Sentence: _____

7. Find the length of x.
Round your answer to the nearest tenth (1 decimal place).
Use ΔCAE.



CA = _____ cm

CB = CA. Both are radii.

CE =

Use the Pythagorean relationship to calculate the length of EA.

Formula →

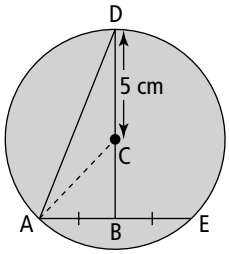
Substitute →

Solve →

The length of x is _____.

Name: _____ Date: _____

8. The radius CD is 5 cm and BC is 3 cm.
What is the area of ΔABD?



CA is also the radius, so the length is _____ cm. *Label* CA on the diagram.

BC = _____ cm

ΔABC is a _____ triangle. Find the length of AB.

Formula →

Substitute →

Solve →

Area of ΔABD:

Formula→ $A = b \times h \div 2$

h = DC + BC
= ___ + ___
= ___

Substitute →

Solve →

Sentence: _____