

WORKSHEET 09C – Due on week 5 day 1

1	<u>Reading/studying C. 9.3-9.4</u> <ul style="list-style-type: none"> • Textbook • Slides • Chapter Summary (at the end of the chapter lessons) <div>Keep your notes</div>
2	<u>Self-Check questions</u> <ul style="list-style-type: none"> • Answer the questions as you come across them during your reading, using pencil. • Check the answers & correct (if necessary) with non-red pen. <div> Write down the answers. Check solutions, noting mistakes to learn from (if any). Hand in your work. </div>
3	<u>Practice Exercises</u> <p>Do E: 9.4, 9.8: continue with the source files done in a previous worksheet</p>
	(continue next page)

4	<p>Programs</p> <p>a) Create a class called Circle, which is a subclass of Ellipse2D.Double, with the following features:</p> <ul style="list-style-type: none"> ▪ It only represents a circle ▪ It calculates the center and radius from the inherited fields in Ellipse2D.Double; i.e. it does not keep them as fields – there are NO fields in Circle ▪ It draws itself, given the Graphics object ▪ Hint: Write the following: <ul style="list-style-type: none"> • constructor Circle (double cx, double cy, double radius) • double getRadius() • void draw(Graphics2D g2) • public void translate(double dx, double dy) <p>NOTE: you must write the translate method because the Ellipse2D.Double class does not have such method</p> <p>b) Create a class called OlympicLogo, which is a subclass of Circle, with the following features:</p> <ul style="list-style-type: none"> ▪ It represents one Olympic logo, and optionally keeps the width of the (brush) stroke so that the larger the circle, the thicker the stroke ▪ The inherited info from Circle class is for the middle circle of the top row, i.e., black circle – Do NOT keep any Circle or Ellipse2D.Double object in OlympicLogo ▪ It draws the 5 circles, with calculated locations and (same) radius – Hint: <i>use the inherited info for the black circle to draw it, and then repeatedly translate it to draw the other 4 circles; i.e., do NOT create a new circle at any time</i> ▪ Hint: <ul style="list-style-type: none"> • field: private int ringThickness; • constructor: OlympicLogo(double cx, double cy, double radius) • overridden method: void draw(Graphics2D g2) ▪ Caution: <ul style="list-style-type: none"> • There should NOT be any code in OlympicLogo to create any Circle or Ellipse2D.Double object (i.e., with new) because OlympicLogo “is a” Circle or Ellipse2D.Double already <p>c) Create classes called OlympicComponent & OlympicViewer, or OlympicComponent & ComponentPrintable & SwingPrinter, to:</p> <ul style="list-style-type: none"> ▪ create & draw at least three Olympic logos, at random locations and of random/various sizes ▪ you may use loop(s) <p>NOTE: see the “Car” and/or “GradeReport” project</p>
5	<p>Submit code online</p>
6	<p>Share in online Discussion</p> <p>Reminder: When sharing, share something that is a learning opportunity to your classmates. Do not simply report your status.</p>

THE END