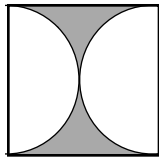


COUNTDOWN Challenge

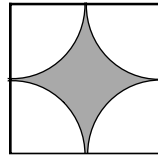
Circle Design

Circles are often used as the base of beautiful designs. Use what you know about circles to find the area of the shaded section in each of the three designs below.

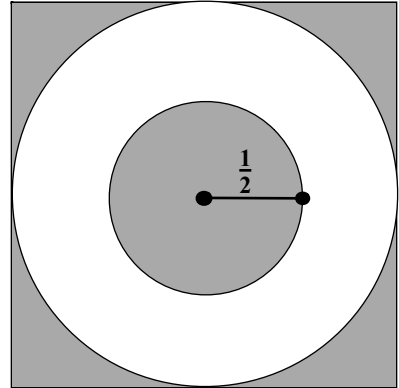
HINT: $A = \pi r^2$



2 cm

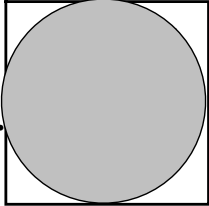
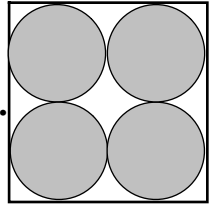
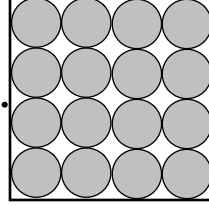


2 cm



2 in

Using the circle designs below, calculate which design creates the most waste when the circle(s) is/are cut out of the 4 cm square.

Design	Area of Square	Area of Circle(s)	Area of Wasted Material	% Wasted $\frac{\text{Area wasted}}{\text{Area of square}}$	% Circle(s) $\frac{\text{Area of circle(s)}}{\text{Area of square}}$
A. 					
B. 					
C. 					

How many total centimeters of cutting are required to cut the circle(s) out of each square?

A. _____

B. _____

C. _____