An Exemplar Response

STAAR® Test	Grade 7 M		Item #	2	Content SE	7.9B		SE Type	Readiness
Administration	Spring 2018		Reporting Category	3	Process SE	Not Reported		Unit (IFD)	07, 12

2 An observatory is shaped like a cylinder standing on one of its bases with a dome on top. The diameter of the floor of the observatory is 64 feet, as shown in the diagram.
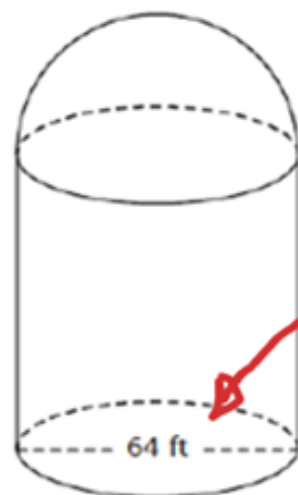
64 ft

Which measurement is closest to the circumference of the base of the observatory in feet?

F   200.96 ft

G   3,215.36 ft

H   100.48 ft

J   401.92 ft

① use this formula

$c = \pi \cdot d$

② d is the diameter

$d = 64\ ft$

③ substitute (plug in) the values

$c = \pi \cdot d$

$c = 3.14 \cdot 64$

Solution

$c = 200.96\ ft$