Chapter 8 Gifted and Enrichment Answers

1. $A = \pi r^2$

Therefore, $r = \sqrt{\frac{A}{\pi}}$

$$r = \sqrt{\frac{572.265}{3.14}}$$

$$r = \sqrt{182.25}$$

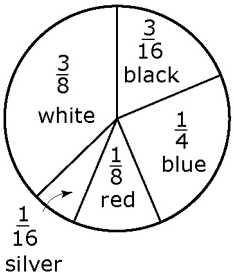
$$r = 13.5$$

Diameter = 13.5 × 2 = 27 cm

The minimum dimensions of the box are 27 cm x 27 cm x 4 cm.

2. The diameter of the circle graph should be 8 cm.

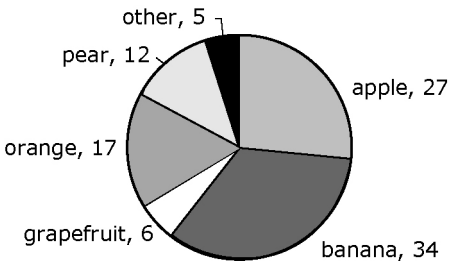
Cars on the Lot by Colour



3. Fruit Brought for Lunch

Fruit	Number of Students
Apple	27
Banana	34
Grapefruit	6
Orange	17
Pear	12
Other	5

Fruit Bought for Lunch



4. Diameter of circle run by horses:

20 m − 1.5 m − 1.5 m = 17 m

Circumference of circle run by horses:

$C = \pi d$

$C \approx 3.14 \times 17$

$C \approx 53.38$ m

Number of laps in 1 km $\approx \frac{1000}{53.38} \approx 18.73$

The minimum number of full laps the horses must complete is 19.