

27 Using the formula for the volume of a cone, express r in terms of V , h , and π .

on reference sheet

means to solve for r
(get r by itself)

$$V = \frac{1}{3} \pi r^2 h$$

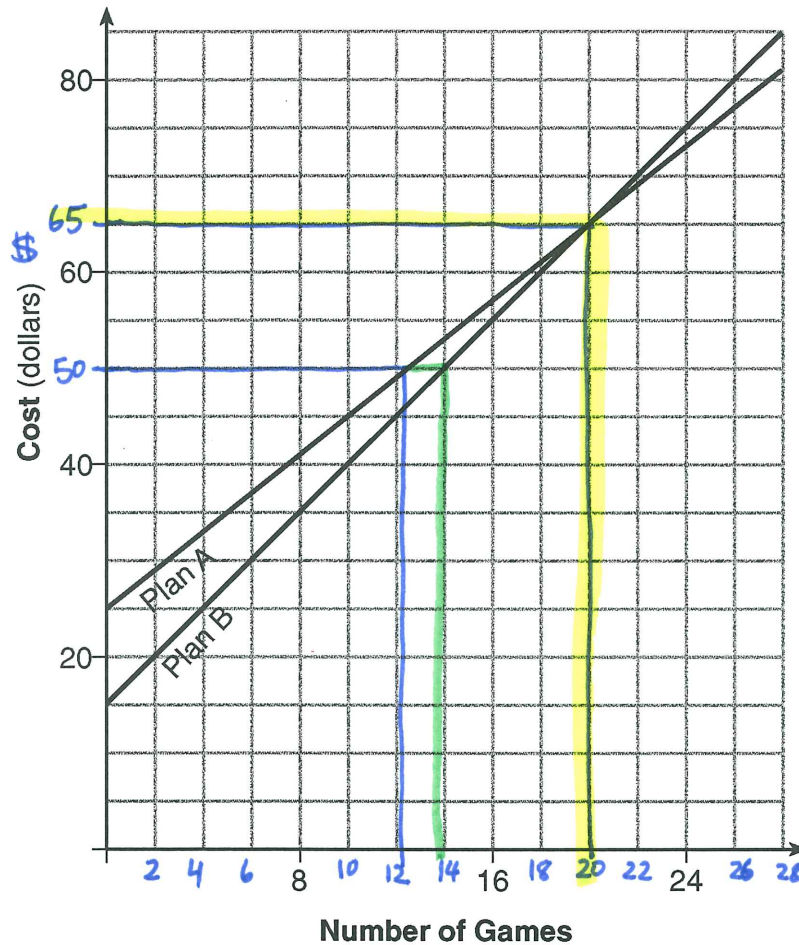
$\frac{1}{3} \pi h$

$\frac{V}{\frac{1}{3} \pi h}$

$\sqrt{\frac{V}{\frac{1}{3} \pi h}} = r$

$$r = \sqrt{\frac{V}{\frac{1}{3} \pi h}}$$

28 The graph below models the cost of renting video games with a membership in Plan A and Plan B.



Explain why Plan B is the better choice for Dylan if he only has \$50 to spend on video games, including a membership fee.

\$50 → Plan A gives 12 games

\$50 → Plan B gives 14 games

Plan B is the better choice for \$50 because he can get 2 more games.

Bobby wants to spend \$65 on video games, including a membership fee. Which plan should he choose? Explain your answer.

For \$65, Bobby can choose either Plan A or Plan B, because he can get the same number of games for both plans.

34 The heights, in feet, of former New York Knicks basketball players are listed below.

6.4	6.9	6.3	6.2	6.3	6.0	6.1	6.3	6.8	6.2
6.5	7.1	6.4	6.3	6.5	6.5	6.4	7.0	6.4	6.3
6.2	6.3	7.0	6.4	6.5	6.5	6.5	6.0	6.2	

Using the heights given, complete the frequency table below.

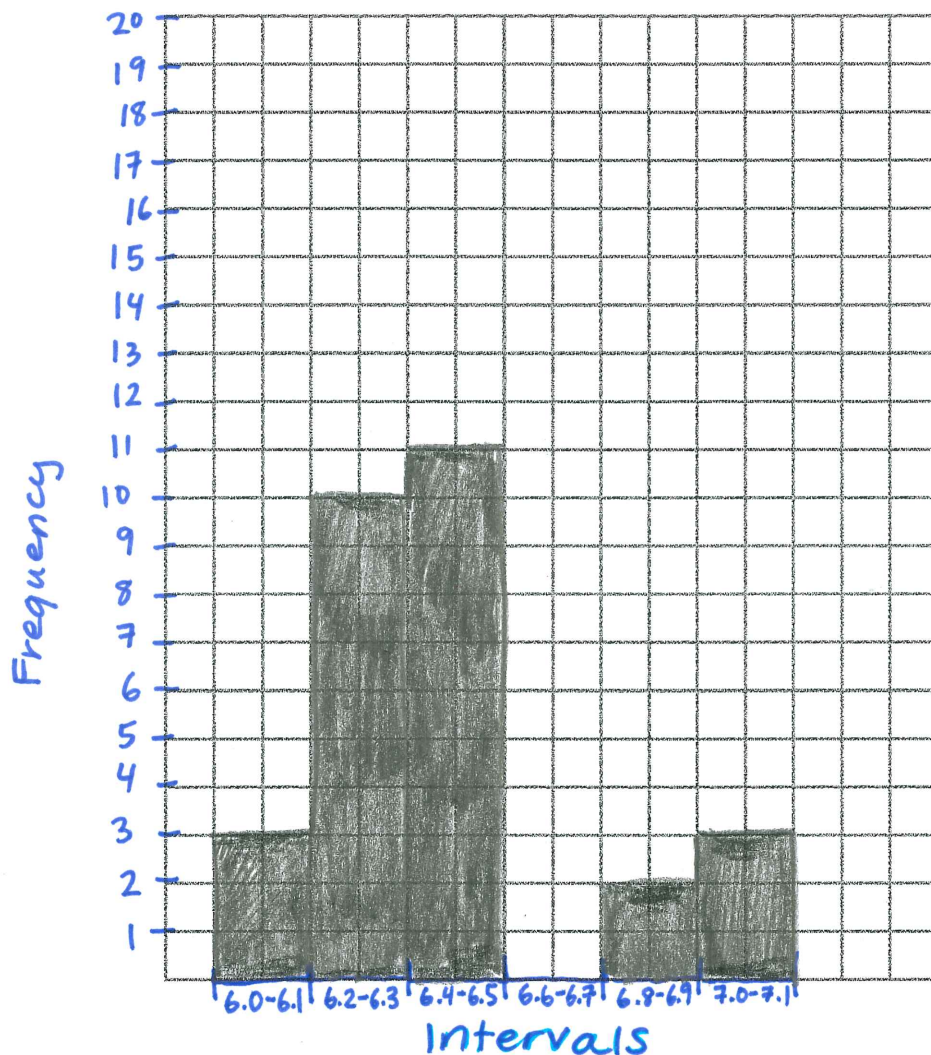
how often something occurs

Interval	Frequency	
6.0 – 6.1		3
6.2 – 6.3		10
6.4 – 6.5		11
6.6 – 6.7		0
6.8 – 6.9		2
7.0 – 7.1		3

Question 34 is continued on the next page.

Question 34 continued.

Based on the frequency table created, draw and label a frequency histogram on the grid below.



Determine and state which interval contains the upper quartile. Justify your response.

The 6.4-6.5 interval contains the upper quartile because if you divide 29 (the total # of heights listed) by 4, you get 7.25. If you count back 7.25 heights from the tallest height on the frequency table, you get 6.5 which is in that interval.