

Student Guide

How Close Is Close Enough (SG pp. 337–338)
Questions 1–9

1. **A.*** 10 sq cm
B. 10 is the middle number.
- 2.* Estimates of 9, 10, and 11sq cm that cluster around the median are close.
3. **A.*** 42 sq cm
B. 42 is the number in the middle
- 4.* Estimates of 42 and 45 sq cm are close.
- 5.* 3 sq cm
- 6.* 3 sq cm
- 7.* Possible response: Arti’s is better since the area she counted was larger. With smaller areas, the range of acceptable estimates is smaller.
8. **A.** 32 sq cm
B. 10 sq cm
C. 7 sq cm
D. Answers will vary. Possible response: Close to the median of 32 sq cm from 31 to 35 sq cm.
E. Answers will vary. It is reasonable to say the estimates of 25 and 42 are not close enough.
9. **A.*** 88 sq cm
B.* 75 sq cm or 75 and 97 sq cm
C.* Possible response: I decided to throw out 75 sq cm, so the median of the remaining six pieces of data is 89 sq cm. I decided to throw out 75 sq cm and 97 sq cm, so the median of the remaining five pieces is 88 sq cm. Taking out the highest and lowest estimates does not significantly change the median.

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The members in Felicia and Roberto’s group compared their estimates. They each recorded their own measurement in a data table. Five other students measured a different shape, Shape B. Here are the estimates for Shape A and Shape B.

Shape A	
Name	Estimate
Lin	10 sq cm
Felicia	9 sq cm
Shannon	7 sq cm
Roberto	16 sq cm
Irma	11 sq cm

Shape B	
Name	Estimate
Arti	45 sq cm
Romesh	42 sq cm
Lee Yah	42 sq cm
Nicholas	49 sq cm
Nila	36 sq cm

1. **A.** What is the median estimate for Shape A?
B. How do you know?
2. Which estimates for the area of Shape A are “close enough”?
3. **A.** What is the median estimate for Shape B?
B. How do you know?
4. Which estimates for the area of Shape B are “close enough”?
5. What is the difference between Shannon’s estimate and the median estimate for Shape A?
6. What is the difference between Arti’s estimate and the median estimate for Shape B?
7. Is Shannon’s estimate for Shape A better, worse, or the same as Arti’s estimate for Shape B? Explain.

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✓ **Check-In: Questions 8-9**

8. Answer the following questions using the data for Shape C.

Shape C	
Name	Estimate
Manny	32 sq cm
Bianca	31 sq cm
Michael	32 sq cm
Jackie	42 sq cm
Ana	28 sq cm
Edward	35 sq cm
Maya	25 sq cm
Luis	34 sq cm

 - A.** What is the median estimate for Shape C?
 - B.** What is the difference between the largest estimate and the median estimate?
 - C.** What is the difference between the smallest estimate and the median estimate?
 - D.** Where do the estimates cluster?
 - E.** The number line below shows the estimates for Shape C. Are there estimates that are not close enough to be useful? If so, which ones?
9. Below is the data table for Shape D. Answer the following questions using this set of data.

Shape D	
Name	Estimate
Frank	91 sq cm
Brandon	86 sq cm
David	97 sq cm
Jessie	84 sq cm
John	88 sq cm
Jacob	75 sq cm
Grace	90 sq cm

 - A.** What is the median estimate?
 - B.** Look at the data. Compare the estimates. Do any of the estimates seem unreasonable? Would you consider throwing out any of the data? If so, which one or ones?
 - C.** Take out any pieces of data that seem “way off.” Now, find the median of the remaining data. Do highest and lowest estimates affect the median very much? Explain.

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*Answers and/or discussion are included in the lesson.