Using approximate numbers

Rounding whole numbers: closest to

We are learning to round whole numbers.

Closest to:

At times we want to work with an approximate number rather than the real thing. When we are using the strategy "closest to", we look to see what tidy number our number is closest to.

examples

Is 67 closer to 60 or 70?

67 is closer to 70 as 67 is only 3 away from 70, but is 7 away from 60

Is 65 closer to 60 or 70?

65 is exactly halfway, so it is hard to say. To get around this problem we have a convention that says we round 65 to 70 (so when it is exactly halfway we say that it is closer to the bigger of the two numbers).

When we write numbers approximately we use a squiggly equal sign to show what we have done. One way to write the answer to the question above is to write $65 \approx 70$. When reading this we say 65 is close to 70 or 65 is approximately 70.

Exercise 1

Say which number these are closest to. Write your answers as it is done above with the squiggly equals

1)   (a)   Is 47 closest to 40 or 50?   (b)   Is 47 closer to 0 or 100?
2)   (a)   Is 341 closer to 300 or 400?   (b)   Is 341 closer to 340 or 350?
3)   (a)   Is 1237 closer to 1000 or 2000? (b)   Is 1237 closer to 1200 or 1300?
4)   Is 150 closer to 100 or 200?
5)   (a)   Is 155 closer to 100 or 200?   (b)   Is 155 closer to 150 or 160?
6)   (a)   Is 205 closer to 200 or 300?   (b)   Is 205 closer to 200 or 210?
7)   Is 5 closer to 0 or 10?
8)   (a)   Is 647 closer to 600 or 700?   (b)   Is 647 closer to 640 or 650?
9)   (a)   Is 249 closer to 200 or 300?   (b)   Is 249 closer to 240 or 250?
10)   (a)   Is 1945 closer to 1900 or 2000? (b)   Is 1945 closer to 1940 or 1950?
11)   Write an explanation for your answer to number one. Be prepared to share it with the class. Don't forget to refer to counters, play money or ice-block sticks if that helps

Rounding: closest to
Answers

Exercise 1

1)   (a) $47 \approx 50$ (b) $47 \approx 0$

2)   (a) $341 \approx 300$ (b) $341 \approx 340$

3)   (a) $1237 \approx 1000$ (b) $1237 \approx 1200$

4) $150 \approx 200$

5)   (a) $155 \approx 200$ (b) $155 \approx 160$

6)   (a) $205 \approx 200$ (b) $205 \approx 210$

7) $5 \approx 10$

8)   (a) $647 \approx 600$ (b) $647 \approx 650$

9)   (a) $249 \approx 200$ (b) $249 \approx 250$

10)   (a) $1945 \approx 1900$ (b) $1945 \approx 1950$

11)   47 is closer to 50 than 40 as it is 3 away from 50 but 7 away from 40. When compared to 0 or 100, it is closer to zero, as 47 is less than halfway between 0 and 100