Example

Round 324.56 to the nearest whole number.

Answer

Since we are rounding 324.56 to the nearest whole number, we focus on the first digit after the decimal point. Since this number is 5 or more, we round the number up. So, we add 1 to the rounding number, and replace everything to the right of the rounding number with a zero. Therefore, 324.56 rounded to the nearest whole number is 325.

Exercises

1. Round 126.4 to the nearest ten.

2. Round 3563.55 to the nearest hundred.

3. Round 264mg to the nearest 10mg.

4. What is 3655g to the nearest kg?

5. What is 2315mL to the nearest L?

6. What is 10cm rounded to the nearest m?

7. You calculate that, according to their bodyweight, a patient needs to be given 423mg of a drug. You are given pills that contain 100mg of the drug, and they cannot be broken up. How many whole pills should the patient be given to get the closest dose to the 423mg?

8. You are walking to your friend's house. Their house is 1000m away from your house. You walk 735m of the way there, when it starts to rain. Should you go back to your house to get an umbrella, or continue to your friend's house if you want to be in the rain for the least amount of time?

Answers

1. 130

    - Since we want to round 126.4 to the nearest ten, we look at the number in the units column. Since this is a 6 (i.e. it is more than 5) we round up, so we add 1 to the rounding number and replace everything to the right of the rounding number with zeros. Therefore, 126.4 rounded to the nearest ten is 130.

2. 3600

    - Since we want to round 3573.55 to the nearest hundred, we look at the number in the tens column. Since this is a 7 (ie it is more than 5) we round up, so we add 1 to the rounding number and replace everything to the right of the rounding number with zeros. Therefore, 3573.55 rounded to the nearest hundred is 3600.

3. 260mg

    - Since we want to round 264mg to the nearest 10mg, we look at the number in the units column. Since this is a 4 (i.e. it is less than 5) we round down, so we replace everything to the right of the rounding number with zeros. Therefore, 264mg rounded to the nearest 10mg is 260mg. You must remember the units!

4. 4kg

    - 1kg is equal to 1000g (you can check the factsheets on units if you didn't know this) so this question is really asking 'What is 3655g to the nearest 1000g? Convert your answer to kg.'
    Since we are rounding 3655g to the nearest 1000g, we look at the number in the hundreds column. Since this is a 6 (i.e. it is more than 5) we round up, so we add 1 to the rounding number, and replace everything to the right of the rounding number with zeros. Therefore, 3655g to the nearest 1000g is 4000g. We now convert this into kg. 4000g = 4 x 1000g = 4 x 1kg = 4kg. (Check out the factsheets on unit conversion if you don't know how to do this.)

Library and Learning Services
Study Development
Email: studydevelopment@yorksj.ac.uk

YORK
ST JOHN
UNIVERSITY
Est. 1841

5. **2L**

   - 1L is equal to 1000mL, so this question is really asking 'What is 2315mL to the nearest 1000mL? Convert your answer to L.'

     Since we are rounding 2315mL to the nearest 1000mL, we look at the number in the hundreds column. Since this is a 3 (ie less than 5) we round down, so we replace everything to the right of the rounding number with zeros. Therefore, 2315mL to the nearest 1000mL is 2000mL.

     We now convert this into L. 2000mL = 2 x 1000mL = 2 x 1L = 2L.

6. **0m**

   - 1m is equal to 100cm, so this question is really asking 'What is 10cm to the nearest 100cm? Convert your answer to m.'

     Since we are rounding 10cm to the nearest 100cm, we look at the number in the tens column. Since this is a 1 (ie less than 5) we round down, so we replace everything to the right of the rounding number with zeros. Therefore, 10cm to the nearest 100cm is 0cm.

     We now convert this into m. 0cm=0m.

7. **4 pills**

   - Since the pills contain 100mg of the drug, this question is really asking 'what is 423mg to the nearest 100mg? Convert this into the number of pills required.' 423mg to the nearest 100mg is 400mg. So, we give the patient 4 pills since 4 x 100mg = 400mg.

8. You should continue to your friend's house

   - This question is really saying 'round 735m to the nearest 1000m'. Since 735m to the nearest 1000m is 1000m, we are saying that you are closer to the 1000m mark (your friend's house) than you are to the 0m mark (your house). Therefore, in order to walk the shorter distance (and so be in the rain for less time) you should walk to your friend's house.

Support: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.
- Join a tutorial or workshop on the Study Development tutorial and workshop webpage or search 'YSJ study development tutorials.'
- Access our Study Success resources on the Study Success webpage or search 'YSJ study success.'

Library and Learning Services
Study Development
Email: studydevelopment@yorksj.ac.uk

YORK
ST JOHN
UNIVERSITY
Est. 1841