

Explain why measuring units must be identical

NAME	DATE	SCORE / 10
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1 Emma measures a mat with 2 big cubes and 5 small cubes. Emma says the mat is 7 cubes long. Why is Emma wrong?

- ☐ The mat is too long to measure ☐ Emma used too many cubes
☐ You cannot measure with cubes ☐ The cubes are not all the same size

2 Maya measures a book with 2 big blocks and 5 small blocks. Maya says the book is 7 blocks long. Why is that not the right length?

FOR THE ADULT

- Put 2 big blocks and 5 small blocks end to end along a book. No blocks? Use 2 long and 5 short strips of paper.
- Say: "Maya says the book is 7 blocks long. Why is that not the right length?"
- Listen, then write down what the child says. Do not give the reason.

☐ Did it ☐ Not yet The child said: _____

3 Ana measures a desk with 5 big sticks and 5 small sticks. Ana says the desk is 10 sticks long. Why is Ana wrong?

- ☐ Ana used too many sticks ☐ The desk is too long to measure
☐ The sticks are not all the same size ☐ You cannot measure with sticks

4

Ivy measures a book with 4 big clips and 3 small clips. Ivy says the book is 7 clips long. Why is that not the right length?

FOR THE ADULT

1. Put 4 big clips and 3 small clips end to end along a book. No clips? Use 4 long and 3 short strips of paper.
2. Say: "Ivy says the book is 7 clips long. Why is that not the right length?"
3. Listen, then write down what the child says. Do not give the reason.

☐ Did it ☐ Not yet The child said: _____

5

Leo measures a book with 4 big blocks and 3 small blocks. Leo says the book is 7 blocks long. Why is Leo wrong?

- ☐ You cannot measure with blocks ☐ Leo used too many blocks
☐ The book is too long to measure ☐ The blocks are not all the same size

6

Noah measures a book with 2 big sticks and 4 small sticks. Noah says the book is 6 sticks long. Why is that not the right length?

FOR THE ADULT

1. Put 2 big sticks and 4 small sticks end to end along a book. No sticks? Use 2 long and 4 short strips of paper.
2. Say: "Noah says the book is 6 sticks long. Why is that not the right length?"
3. Listen, then write down what the child says. Do not give the reason.

☐ Did it ☐ Not yet The child said: _____

7

Ivy measures a table with 2 big clips and 5 small clips. Ivy says the table is 7 clips long. Why is Ivy wrong?

- ☐ The clips are not all the same size ☐ The table is too long to measure
☐ Ivy used too many clips ☐ You cannot measure with clips

8

Emma measures a book with 5 big cubes and 2 small cubes. Emma says the book is 7 cubes long. Why is that not the right length?

FOR THE ADULT

1. Put 5 big cubes and 2 small cubes end to end along a book. No cubes? Use 5 long and 2 short strips of paper.
2. Say: "Emma says the book is 7 cubes long. Why is that not the right length?"
3. Listen, then write down what the child says. Do not give the reason.

☐ Did it ☐ Not yet The child said: _____

9

Ivy measures a mat with 4 big cubes and 3 small cubes. Ivy says the mat is 7 cubes long. Why is Ivy wrong?

- ☐ You cannot measure with cubes ☐ The cubes are not all the same size
☐ Ivy used too many cubes ☐ The mat is too long to measure

10

Maya measures a book with 2 big clips and 4 small clips. Maya says the book is 6 clips long. Why is that not the right length?

FOR THE ADULT

1. Put 2 big clips and 4 small clips end to end along a book. No clips? Use 2 long and 4 short strips of paper.
2. Say: "Maya says the book is 6 clips long. Why is that not the right length?"
3. Listen, then write down what the child says. Do not give the reason.

☐ Did it ☐ Not yet The child said: _____

Explain why measuring units must be identical

1 The cubes are not all the same size

3 The sticks are not all the same size

5 The blocks are not all the same size

7 The clips are not all the same size

9 The cubes are not all the same size

2 Watched by the adult

What counts as right: Says the blocks are not all the same size, so counting them does not tell how long the book is: every block has to be the same size. Any words that say this count (“some are big and some are small”). A reason about using too many blocks, or the book being too long, is Not yet.

4 Watched by the adult

What counts as right: Says the clips are not all the same size, so counting them does not tell how long the book is: every clip has to be the same size. Any words that say this count (“some are big and some are small”). A reason about using too many clips, or the book being too long, is Not yet.

6

Watched by the adult

What counts as right: Says the sticks are not all the same size, so counting them does not tell how long the book is: every stick has to be the same size. Any words that say this count (“some are big and some are small”). A reason about using too many sticks, or the book being too long, is Not yet.

8

Watched by the adult

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10

Watched by the adult

What counts as right: Says the clips are not all the same size, so counting them does not tell how long the book is: every clip has to be the same size. Any words that say this count (“some are big and some are small”). A reason about using too many clips, or the book being too long, is Not yet.
