

Reasoning and Problem Solving

Step 1: Compare Lengths and Heights

National Curriculum Objectives:

Mathematics Year 1: (1M1) [Compare, describe and solve practical problems for :lengths and heights \[for example, long/short, longer/shorter, tall/short, double/half\]](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain if a given statement is correct when comparing the height of 2 objects.

Expected Explain if a given statement is correct when comparing the height of 3 objects.

Greater Depth Explain if a given statement is correct when comparing the heights of 4 objects.

Questions 2, 5 and 8 (Problem Solving)

Developing Write correct statements to compare the length of 2 objects. Word bank provided as support.

Expected Write correct statements to compare the length of 3 objects. Word bank provided as support.

Greater Depth Write correct statements to compare the length of 3 objects. No word bank provided.

Questions 3, 6 and 9 (Problem Solving)

Developing Identify which animal is being described when comparing the height of 2 animals.

Expected Identify which animal is being described when comparing the height of 3 animals.

Greater Depth Identify which two animals are being described when comparing the height of 4 animals.

More [Year 1 Length and Height](#) resources.

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Compare Lengths and Heights

Compare Lengths and Heights

1a. Dan is comparing items at school.



He says,



The glue stick is the shortest.

Do you agree? Explain your answer.



R

1b. Lola is comparing items at school.



She says,



The paper clip is the tallest.

Do you agree? Explain your answer.



R

2a. Use the items below to make comparison statements.



scarf



sock

is shorter than

is longer than

Find 2 possibilities.



PS

2b. Use the items below to make comparison statements.



watch



belt

is shorter than

is longer than

Find 2 possibilities.



PS

3a. Ava is thinking of an animal.



She says,



My animal is the shortest.

Which animal is Ava thinking of?



PS

3b. Raj is thinking of an animal.



He says,



My animal is the tallest.

Which animal is Raj thinking of?



PS

Compare Lengths and Heights

Compare Lengths and Heights

4a. May is comparing items at school.



She says,



The book is the tallest.
The pen is the shortest.

Do you agree? Explain your answer.



R

4b. Robin is comparing items at school.



He says,



The paintbrush is the tallest.
The scissors are the shortest.

Do you agree? Explain your answer.



R

5a. Use the items below to make comparison statements.



bag

shoe

scarf

is shorter than

is longer than

Find 3 possibilities.



PS

5b. Use the items below to make comparison statements.



hammer

torch

spade

is shorter than

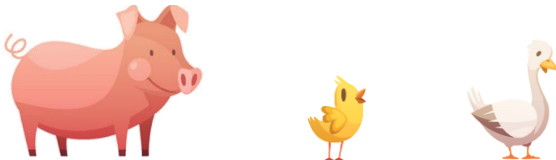
is longer than

Find 3 possibilities.



PS

6a. Russ is thinking of an animal.



He says,



My animal is shorter than the pig but taller than the chick.

Which animal is Russ thinking of?



PS

6b. Kat is thinking of an animal.



She says,



My animal is taller than the mouse and the rabbit.

Which animal is Kat thinking of?



PS

Compare Lengths and Heights

Compare Lengths and Heights

7a. Ryan is comparing items at school.



He says,



The glue stick is shorter than the pencil and taller than the paintbrush.

Do you agree? Explain your answer.



R

7b. Sasha is comparing items at school.



She says,



The book is taller than the paperclip and shorter than the scissors.

Do you agree? Explain your answer.



R

8a. Make comparison statements about the length of the items below.



key

bowl

glove

Find 3 possibilities.



PS

8b. Make comparison statements about the length of the items below.



sock

case

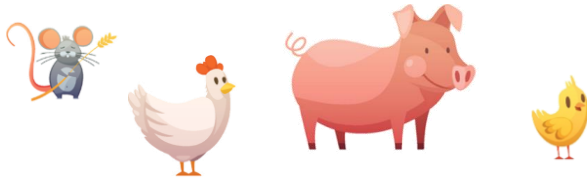
tie

Find 3 possibilities.



PS

9a. Alina is thinking of 2 animals.



She says,



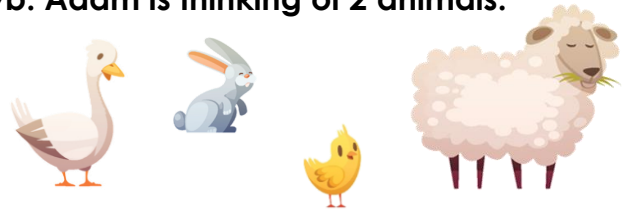
My animals are shorter than the pig.

Which 2 animals is Alina thinking of?



PS

9b. Adam is thinking of 2 animals.



He says,



My animals are taller than the chick.

Which 2 animals is Adam thinking of?



PS

Reasoning and Problem Solving Compare Lengths and Heights

Developing

- 1a. Dan is correct because the paintbrush is taller than the glue stick.
- 2a. The scarf is longer than the sock; The sock is shorter than the scarf.
- 3a. The mouse

Expected

- 4a. May is incorrect because the book is the tallest item but the glue stick is the shortest.
- 5a. Various answers, for example: The shoe is shorter than the scarf; The bag is shorter than the scarf; The scarf is longer than the bag.
- 6a. The goose

Greater Depth

- 7a. Ryan is incorrect because the glue stick is shorter than both the pencil and the paintbrush.
- 8a. Various answers, for example: The bowl is longer than the glove; The glove is longer than the key; The key is shorter than the bowl.
- 9a. Various answers, for example; the chick and the hen; the mouse and the hen; the mouse and the chick.

Reasoning and Problem Solving Compare Lengths and Heights

Developing

- 1b. Lola is incorrect because the book is the tallest item.
- 2b. The belt is longer than the watch; The watch is shorter than the belt.
- 3b. The pig

Expected

- 4b. Robin is correct because the paintbrush is taller than the scissors/pencil case and the scissors are shorter than the paintbrush/ pencil case.
- 5b. Various answers, for example: The torch is shorter than the spade; The torch is shorter than the hammer; The spade is longer than the hammer.
- 6b. The sheep

Greater Depth

- 7b. Sasha is incorrect because the book is taller than both the paperclip and the scissors.
- 8b. Various answers, for example: The sock is shorter than the case; The case is longer than the sock; The tie is longer than the sock.
- 9b. Various answers, for example; the sheep and the rabbit; the rabbit and the goose; the goose and the sheep.