Reasoning and Problem Solving
Step 7: Comparing Objects

National Curriculum Objectives:

Mathematics Year 3: (3N2a) Compare and order numbers up to 1000

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Given the value of three symbols, determine which set of symbols represents a greater or smaller number. Numbers up to 1,000 with symbols grouped in sets.
Expected Given the value of three symbols, determine which set of symbols represents a greater or smaller number. Numbers up to 1,000 with symbols displayed randomly.
Greater Depth Given the value of three symbols, determine which set of symbols represents a greater or smaller number. Numbers up to 1,000 with symbols displayed randomly and some unconventional partitioning.

Questions 2, 5 and 8 (Problem Solving)
Developing Find 3 possibilities to make a comparative statement correct. Numbers up to 1,000 shown using Base 10.
Expected Find 5 possibilities to make a comparative statement correct. Numbers up to 1,000 shown using Base 10 and place value counters.
Greater Depth Find 5 possibilities to make a comparative statement correct. Numbers up to 1,000 shown using mixed manipulatives with some unconventional partitioning.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether a comparative statement is correct. Numbers up to 1,000 shown using Base 10.
Expected Explain whether a comparative statement is correct. Numbers up to 1,000 shown using Base 10 and place value counters.
Greater Depth Explain whether a comparative statement is correct. Numbers up to 1,000 shown using mixed manipulatives with some unconventional partitioning.

More Year 3 Place Value resources.

Did you like this resource? Don't forget to review it on our website.

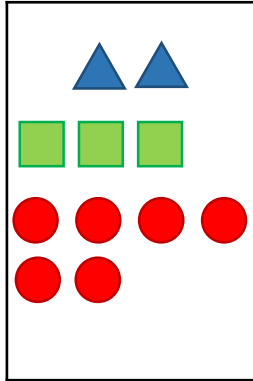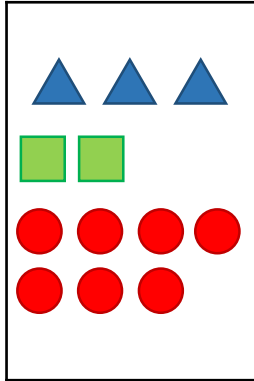# Comparing Objects

1a. If ▲ represents one hundred, ■ represents one ten and ● represents one, which box shows the greater number?
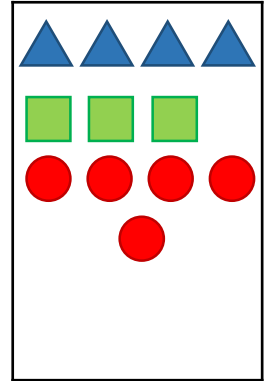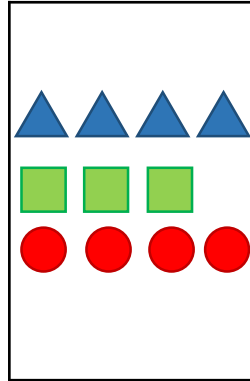
A   B

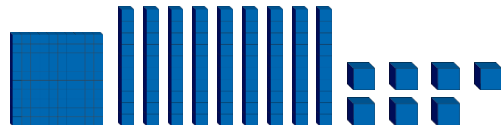**2a.** How could all the Base 10 below be arranged to make the statement correct?

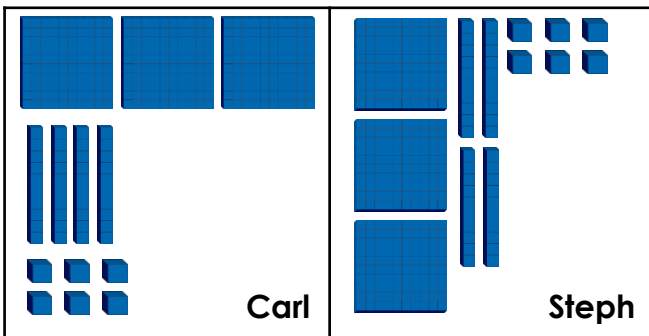|	<	
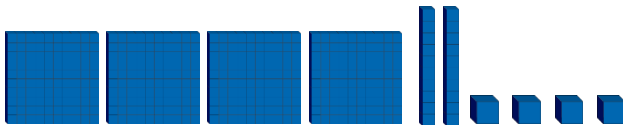
Find 3 possible answers.

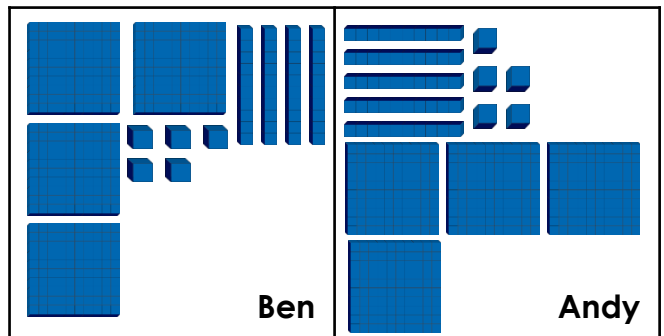**3a.** Carl and Steph say they have represented the same number using Base 10.

Carl   Steph

Do you agree? Explain why.

Comparing Objects

1b. If ▲ represents one hundred, ■ represents one ten and ● represents one, which box shows the greater number?

A   B

2b. How could all the Base 10 below be arranged to make the statement correct?

	>	

Find 3 possible answers.

3b. Ben and Andy say they have represented the same number using Base 10.

Ben   Andy
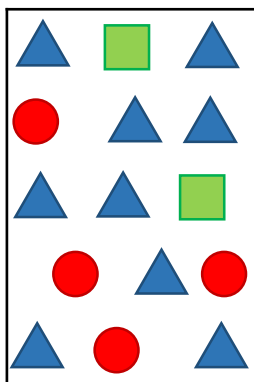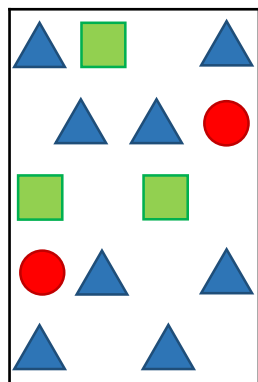
Do you agree? Explain why.

Comparing Objects

4a. If ▲ represents one hundred, ▢ represents one ten and ● represents one, which box shows the greater number?

A   B

PS

Comparing Objects

4b. If ▲ represents one hundred, ▢ represents one ten and ● represents one, which box shows the greater number?
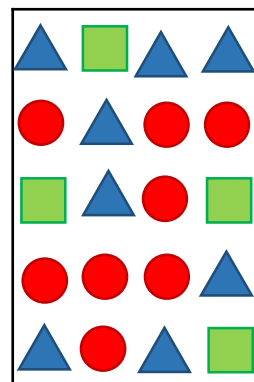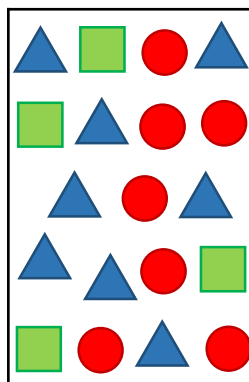
A   B

PS

5a. How could all the counters below be arranged to make the statement correct?

| 100 | 100 | 100 | 100 | 10 | 10 | 1 |
| 100 | 100 | | | 10 | | 1 |

| | < | |

Find 5 possible answers.

PS

5b. How could all the Base 10 below be arranged to make the statement correct?

| | > | |

Find 5 possible answers.

PS

6a. Rob and Maja say they have represented the same number using Base 10 and place value counters.

Rob   Maja

100	100	1	1
100	100	1	1
100	100		

Do you agree? Explain why.

R

6b. Lisa and Arul say they have represented the same number using Base 10 and place value counters.

Lisa   Arul

100	100	1
100	1	1
10	10	10
10	10	10

Do you agree? Explain why.

R

classroomsecrets.co.uk

Reasoning and Problem Solving – Comparing Objects – Year 3 Expected

Comparing Objects

7a. If ▲ represents one hundred, ■ represents one ten and ● represents one, which box shows the greater number?

A   B

PS

Comparing Objects

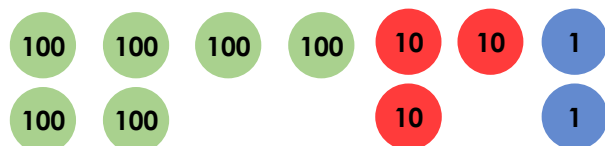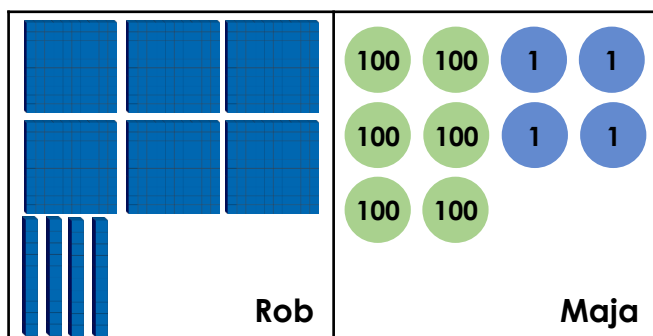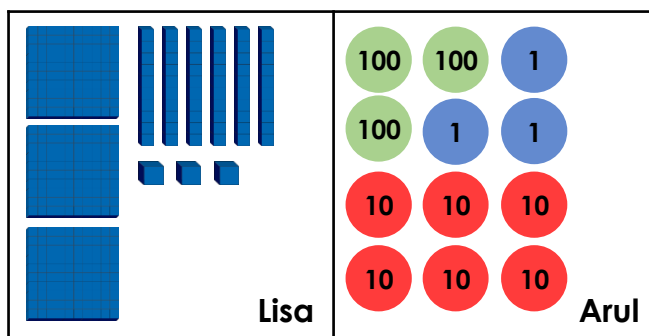**7b.** If ▲ represents one hundred, ■ represents one ten and ● represents one, which box shows the greater number?

A   B

PS

8a. How could all the counters below be arranged to make the statement correct?

	<	
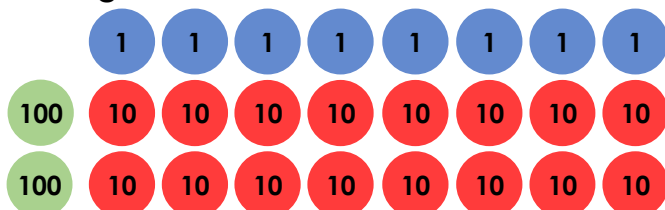
Find 5 possible answers.

PS

8b. How could all the Base 10 below be arranged to make the statement correct?

	>	
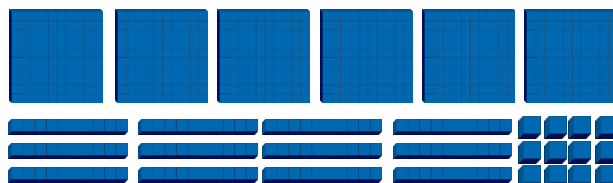
Find 5 possible answers.

PS

9a. Ange and Tony say they have represented the same number using Base 10 and place value counters.

Ange   Tony
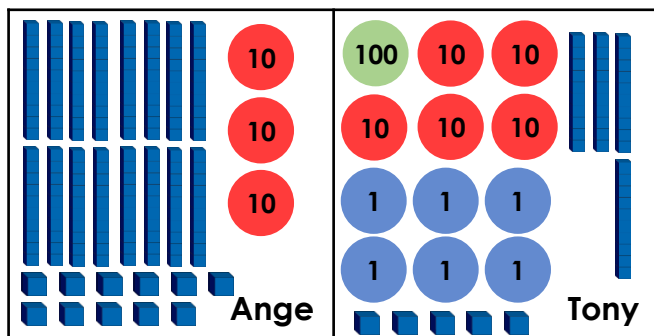
Do you agree? Explain why.

R

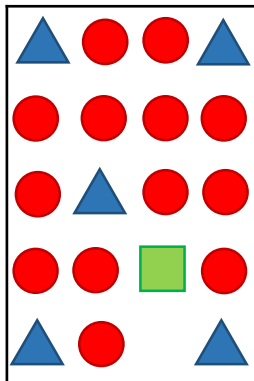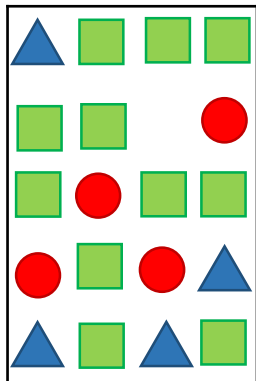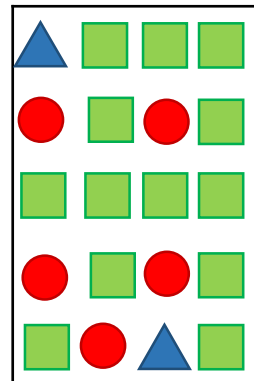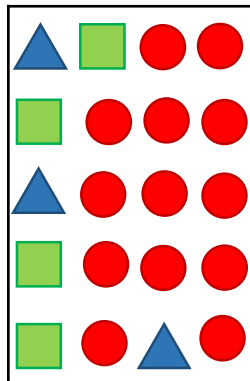**9b.** Toby and Alfie say they have represented the same number using Base 10 and place value counters.

Toby   Alfie

Do you agree? Explain why.

R

Reasoning and Problem Solving – Comparing Objects – Year 3 Greater Depth

Varied Fluency
Comparing Objects

Varied Fluency
Comparing Objects

Developing

1a. A

2a. Various answers, for example:
24 < 400; 200 < 224; 124 < 300

3a. Yes they both have 346.
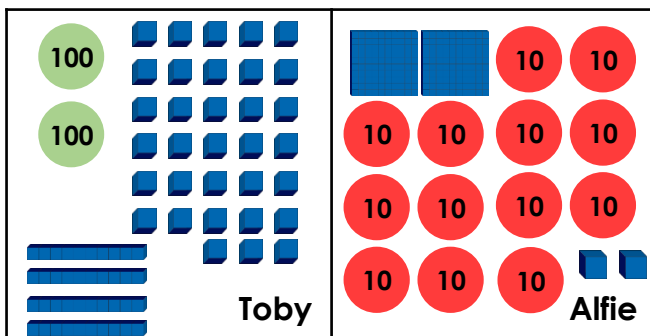
Developing

1b. B

2b. Various answers, for example:
100 > 97; 190 > 7; 107 > 90

3b. No. They both have the same number of hundreds and ones but Ben has 4 tens and Andy has 5 tens so Ben = 445 and Andy = 455.

Expected

4a. B

5a. Various answers, for example:
232 < 300; 215 < 317; 1 < 531; 32 < 500; 230 < 302

6a. No. They both have the same number of hundreds but Rob has 4 tens and Maja has 4 ones so Rob = 640 and Maja = 604.

Expected

4b. B

5b. Various answers, for example:
600 > 64; 404 > 260; 342 > 322; 544 > 120; 351 > 113

6b. Yes they both have 363.

Greater Depth

7a. B

8a. Various answers, for example:
1 < 367; 11 < 357; 168<200; 183<185; 68 < 300

9a. Yes they both have 201.

Greater Depth

7b. A

8b. Various answers, for example:
700 > 32; 500 > 232; 367 > 365; 616 < 116; 731 > 1

9b. No. They both have 2 hundreds but Toby has 4 tens and 33 ones and Alfie has 13 tens and 2 ones so Toby = 273 and Alfie = 332.

classroomsecrets.co.uk
Reasoning and Problem Solving – Comparing Objects ANSWERS