

Student solutions

This task is about solving maths problems with indices.



Some students were giving answers to maths problems written in index form.

Identify which student is correct and explain why. Do NOT use a calculator in this problem.

a) "What is $5^6 \times 5^3$?"

- Awhina said "It equals 25^9 ".
- Rosa said "It equals 5^6 ".
- Karaka said "It equals 5^9 ".
- Hari said "It equals 5^{18} ".
- Sarah said "None of your answers are right".

Which student is correct?

☐ Awhina

☐ Rosa

☐ Karaka

☐ Hari

☐ Sarah

Explain your answer

b) **"What is $7^8 \div 7^2$?"**

- Awhina said "It equals 7^4 ".
- Rosa said "It equals 7^6 ".
- Karaka said "It equals 7^{10} ".
- Hari said "It equals 7^{16} ".
- Sarah said "None of your answers are right".

Which student is correct?

☐ Awhina

☐ Rosa

☐ Karaka

☐ Hari

☐ Sarah

Explain your answer

c) **"What is $2^6 \times 4^3$?"**

- Awhina said "It equals 8^6 ".
- Rosa said "It equals 6^9 ".
- Karaka said "It equals 8^{18} ".
- Hari said "It equals 2^{12} ".
- Sarah said "It equals 6^{18} ".

Which student is correct?

☐ Awhina

☐ Rosa

☐ Karaka

☐ Hari

☐ Sarah

Explain your answer