

22/2/17

Math Problem
NRICH Upper Secondary
System Speak

Answer

Problem

- ab=1
- bc=2
- cd=3
- de=4
- ea=6

Step 1

- 1
- 2
- 3
- 4
- 5

Step 6: $\frac{8a}{3} \times a = 6$

$\frac{8a^2}{3} = 6$

Step 7:

$8a^2 = 18$

$a^2 = \frac{18}{8}$

$a^2 = \frac{18 \cdot 9}{8 \cdot 4}$

$a = \sqrt{\frac{9}{4}}$

$a = \frac{3}{2}^*$

Final Answer

$a = \frac{3}{2}$

$b = \frac{2}{3}$

$c = 3$

$d = 1$

$e = 4$

Only one answer because 5 equations and 5 unknown

Step 8:

$\frac{3}{2} \times b = 1$

$b = 1 \div \frac{3}{2}$

$b = \frac{2}{3}^*$

Step 9:

$\frac{2}{3} \times c = 2$

$c = 2 \div \frac{2}{3}$

$c = 3^*$

Step 10:

$3 \times d = 3$

$d = 1^*$

Step 11:

$1 \times e = 4$

$e = 4$

Step 12:

$4 \times \frac{3}{2} = 6$

Step 2:

6) $b = \frac{1}{a}$

Step 3:

7) $\frac{1}{a} \times c = 2$

$c = 2a$

Step 4:

8) $2a \times d = 3$

$d = \frac{3}{2a}$

Steps:

9) $\frac{3}{2a} \times e = 4$

$e = 4 \times \frac{2a}{3}$

$e = \frac{8a}{3}$