

Reasoning and Problem Solving

Find Pairs of Values 1

Developing

1a. Felicity is incorrect as because both letters would represent 8, but each letter should represent a different number.

2a. $a = 4$; $b = 3$

3a. Richie is incorrect because 17 is not being divided, it is the answer.

Expected

4a. Elodie is incorrect because $7 \div 49$ would give an answer less than 1. Her numbers would work if she swapped them around.

5a. $a = 12$; $b = 4$

6a. Josey is correct because to give an answer of 9, the number being divided must be a multiple of 9. Anything that can be divided by 9, can also be divided by 3. Example: $18 \div 9 = 2$, $18 \div 3 = 6$.

Greater Depth

7a. Polly is incorrect because $8 \div 28$ would give an answer less than 1. Her numbers would work if she swapped them around.

8a. $a = 84$; $b = 0.5$

9a. Evan is incorrect because when two negative numbers are multiplied, the answer is positive. Example: $-2 \times -5 = 10$.

Reasoning and Problem Solving

Find Pairs of Values 1

Developing

1b. Aaron is incorrect because $10 \times 8 = 80$. His values would work if the equation used addition.

2b. $a = 5$; $b = 2$

3b. Saima is correct because only even numbers give an answer of 2 when divided. Example: $16 \div 8 = 2$.

Expected

4b. Daley is correct because $36 \div 6 = 6$.

5b. $a = 18$; $b = 3$

6b. Russell is incorrect because division with two even numbers always produces an odd answer. Example: $10 \div 2 = 5$.

Greater Depth

7b. Guy is correct because $21 \div 5 = 4.2$

8b. $a = 12$; $b = 0.75$

9b. Kirsty is incorrect because dividing by an even number can still give a decimal answer. Example: $117 \div 6 = 19.5$.