Find Pairs of Values 1

7a. Polly writes the following equation:

$a \div b = 3.5$

For one of the possible pairs, she has written:

$a = 8$ and $b = 28$

Is she correct? Explain your answer.

GD R

Find Pairs of Values 1

7b. Guy writes the following equation:

$a \div b = 4.2$

For one of the possible pairs, he has written:

$a = 21$ and $b = 5$

Is he correct? Explain your answer.

GD R

8a. What pair of values have been used in the following equations if the values are always the same?

$a + b$	=	84.5
$a \times b$	=	42
$a \div b$	=	168
$a - b$	=	83.5

GD PS

8b. What pair of values have been used in the following equations if the values are always the same?

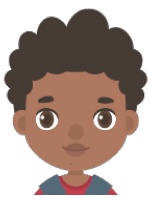
$a + b$	=	$12\frac{3}{4}$
$a \times b$	=	9
$a \div b$	=	16
$a - b$	=	$11\frac{1}{4}$

GD PS

9a. Evan is finding pairs of values for the equation below.

$a \times b = -60$

He says,



Both values must be a negative number because the answer is a negative number.

Is Evan correct? Explain why.

GD R

9b. Kirsty is finding pairs of values for the equation below.

$a \div b = 19.5$

She says,



Value b must be an odd number because the answer is a decimal.

Is Kirsty correct? Explain why.

GD R

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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 ÷ 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 ÷ 9 = 2, 18 ÷ 3 = 6.

Greater Depth

7a. Polly is incorrect because 8 ÷ 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 x -5 = 10.

Reasoning and Problem Solving
Find Pairs of Values 1

Developing

1b. Aaron is incorrect because 10 x 8 = 80. His values would word 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 ÷ 8 = 2.

Expected

4b. Daley is correct because 36 ÷ 6 = 6.

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

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

Greater Depth

7b. Guy is correct because 21 ÷ 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 ÷ 6 = 19.5.

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