6.RP Jim and Jesse's Money

Alignments to Content Standards: 6.RP.A.3

Task

Jim and Jesse each had the same amount of money. Jim spent $58 to fill the car up with gas for a road-trip. Jesse spent $37 buying snacks for the trip. Afterward, the ratio of Jim’s money to Jesse’s money is 1 : 4. How much money did each have at first?

Solutions

Edit this solution

Solution: Use two bar diagrams

We know that Jesse has $21 more than Jim after they make their purchases, because
Jim spent $21 more than Jesse. Since the ratio of money they have remaining is 1 : 4, we know this difference is 3 times what Jim has left.

3 units  = $58 − $37 = $21

1 unit  = $7

We should add what Jim has left to what he spent:

$58 + $7 = $65

They each had $65 at first.

Solution: Same story, slightly different analysis

We know that Jim spent $21 more than Jesse, so Jim has $21 less than Jesse after they make their purchases. Since Jim has only \( \frac{1}{4} \) as much money as Jesse has, the difference between the two amounts is \( \frac{3}{4} \) of the amount of money Jesse has. So 21 is \( \frac{3}{4} \) of the amount of money Jesse has. Therefore, \( \frac{1}{4} \) of the amount of money Jesse has is one third
of this, or 7. So Jesse has $4 \cdot 7 = 28$; and since he spent 37, he originally had $28 + 37 = 65$. So Jim and Jesse each originally had $65$. 