

Unit Transfer Method

Primary 5

Before & After

Lesson 1: Single Unchanged

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Before You Begin

BEFORE YOU BEGIN

(Whole Number)

1. Tom has 5 times **as many** stickers as Mary

Tom → () units

Mary → () units

2. Tom has 5 times **more** stickers than Mary

Tom → () units

Mary → () units

(Fraction)

3. Tom gave away $\frac{3}{5}$ of his stickers.

Total → () units

Gave → () units

Left → () units

4. Tom's stickers **increased by** $\frac{3}{5}$.

Before → () units

Change → () units

After → () units

5. Tom's stickers **decreased by** $\frac{3}{5}$.

Before → () units

Change → () units

After → () units

6. Tom has $4\frac{3}{5}$ **as many** stickers as Mary.

Tom → () units

Mary → () units

7. Tom has $\frac{3}{5}$ **as many** stickers as Mary.

Tom → () units

Mary → () units

Before You Begin

8. Tom has $\frac{3}{5}$ **more** stickers than Mary.

Tom → () units

Mary → () units

9. Tom has $\frac{3}{5}$ **fewer** stickers than Mary.

Tom → () units

Mary → () units

Before You Begin

(Decimal)

10. Tom gave away 0.6 of his stickers.

Total → () units

Gave → () units

Left → () units

11. Tom's stickers **increased by** 0.6 times.

Before → () units

Change → () units

After → () units

12. Tom's stickers **decreased by** 0.6 times.

Before → () units

Change → () units

After → () units

13. Tom has 1.5 times **as many** stickers as Mary.

Tom → () units

Mary → () units

14. Tom has 0.6 times **as many** stickers as Mary.

Tom → () units

Mary → () units

15. Tom has 0.6 times **more** stickers than Mary.

Tom → () units

Mary → () units

16. Tom has 0.6 times **fewer** stickers than Mary.

Tom → () units

Mary → () units

Before You Begin

(Percentage)

17. Tom gave away 60% of his stickers.

Total → () units

Gave → () units

Left → () units

18. Tom's stickers **increased by** 60%.

Before → () units

Change → () units

After → () units

19. Tom's stickers **decreased by** 60%.

Before → () units

Change → () units

After → () units

20. Tom has 150% **as many** stickers as Mary.

Tom → () units

Mary → () units

21. Tom has 60% **as many** stickers as Mary.

Tom → () units

Mary → () units

22. Tom has 60% **more** stickers than Mary.

Tom → () units

Mary → () units

23. Tom has 60% **fewer** stickers than Mary.

Tom → () units

Mary → () units

24. (Ratio)

Tom and Mary have stickers in the **ratio** 3:5.

Tom → () units

Mary → () units

LESSON 1: SINGLE UNCHANGED QUANTITIES

DEFINITION

One of the given quantities remains unchanged.

For instance,

Before: Ali has \$10 and Ben has \$35.

Change: Ali donates \$3 to a charity.

After: Does Ali's money Before and After changes? (Yes / No)
 Does Ben's money Before and After changes? (Yes / No)

| | Ali | Ben |
|--------|-----|-----|
| Before | | |
| Change | | |
| After | | |

→

Conclusion:

GUIDED EXAMPLE 1

Abel and Benny had the same amount of money at first.

After Abel spent \$80,

Benny had 5 times as much money as Abel.

How much money did each of them have at first?

GUIDED EXAMPLE 2

At first, Ismail had a total of 167 stamps from Singapore and Malaysia.
After his father gave him 183 stamps from Singapore,
the number of stamps from Malaysia was $\frac{1}{9}$ the number of stamps from Singapore.
How many stamps from Singapore did he have at first?

GUIDED EXAMPLE 3

There are blue and red pens in a box.

The number of red pens is $\frac{6}{7}$ of the blue pens.

6 more blue pens are added into the box.

The number of red pens is now $\frac{2}{3}$ of the blue pens.

Find the number of red pens.

GUIDED EXAMPLE 4

Marcus had twice as many beads as Kate at first.
After Kate lost 12 of her beads,
Marcus had 3 times as many beads as Kate.
How many beads did they have altogether at first?

GUIDED EXAMPLE 5

At a carnival, the ratio of the number of children to the number of adults was 5 : 2.
When 133 more children joined in,
the number of children was 6 times of the number of adults.
How many children were at the carnival at first?

GUIDED EXAMPLE 6

There was 1.5 times as many apples as oranges in a fruit stall.

After 21 apples were sold,

there was 3 times as many oranges as apples left.

How many fruits were there in the stall at first?

BUILD YOUR UNDERSTANDING

1. Samantha had two pieces of ribbons, A and B.
Ribbon A had the same length as Ribbon B.
After she used 86.8 cm of Ribbon A,
the length of Ribbon B was 8 times as long as the length of Ribbon A.
Find the total length of ribbons A and B at first?

2. $\frac{1}{5}$ of the children in the funfair were girls and the rest were boys.
When 8 girls left the funfair,
the number of girls decreased to $\frac{1}{7}$ of the total number of children.
How many children were at the playground at first?

3. Nigel and Reuben share a sum of money in the ratio of 4 : 5.
After Reuben gave away \$457, he had \$1538 left.
Find the sum of money Nigel and Reuben had at first.

4. Jenna and Sandy had some stickers in the ratio of 3 : 5.
After Sandy gave away 42 stickers,
the ratio of the number of stickers between Jenna and Sandy became 2 : 1.
How many stickers did Jenna have?

5. Mrs Lim baked 3 times as many chicken pies as apple pies.
If she had baked 60 fewer chicken pies,
she would have baked twice as many apple pies as chicken pies.
- a) How many chicken pies did she bake?
 - b) How many apple pies did she bake?

6. Mr. Lim bought a total of 126 red and blue pens.
 $\frac{1}{3}$ of them were red. Some red pens were sold
and the number of red pens remaining was $\frac{2}{7}$ the number of blue pens.
How many red pens were sold?