RATIOS

A DEFINITION

A.1 EXPRESSING RATIOS IN DIFFERENT FORMS

Ex 1: The ratio 3 to 2 is $\square:\square$.

Ex 2: The ratio 5 to 4 is $\square:\square$.

Ex 3: The ratio 7 to 3 is $\square:\square$.

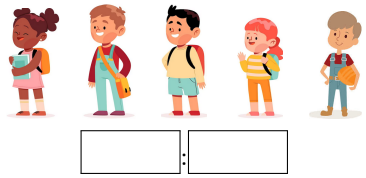
Ex 4: The ratio 8 to 5 is $\square:\square$.

Ex 5: The ratio 10 to 6 is $\square:\square$.

B PART-PART AND PART-WHOLE RATIOS

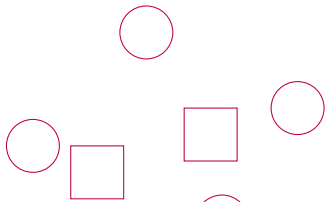
B.1 FINDING RATIOS IN PART-PART

Ex 6: What is the ratio of girls to boys?



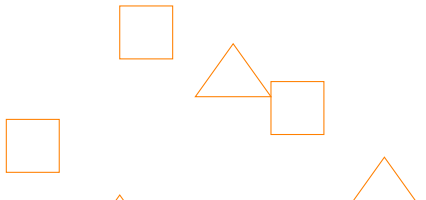
$\square:\square$

Ex 7: What is the ratio of circles to rectangles?



$\square:\square$

Ex 8: What is the ratio of squares to triangles?



$\square:\square$

Ex 9: What is the ratio of oranges to lemons?

$\frac{\square}{\square}$

Ex 10: What is the ratio of girls to boys?

$\frac{\square}{\square}$

B.2 FINDING RATIOS IN PART-WHOLE

Ex 11: What is the ratio of girls to kids?

$\square:\square$

Ex 12: What is the ratio of boys to kids?

$\square:\square$

Ex 13: Louis loves to play sports. In all, he has earned 5 swimming medals, 3 running medals, 6 cycling medals, and 2 triathlon medals.
What is the ratio of Louis's swimming medals to all of his medals?

$\square:\square$

Ex 14: Anna loves to read books. In all, she has read 12 mystery novels, 8 science fiction novels, 5 fantasy novels, and 3 historical novels.
What is the ratio of Anna's mystery novels to all of her books?

$\square:\square$

Ex 15: The table shows the number of different types of birds that are swimming at a lake.

Bird	Number
Seagulls	1
Ducks	9
Geese	7
Swans	2

What is the ratio of swans to total birds?

$\square:\square$

Ex 16: The table shows the number of different types of fruits in a basket.

Fruit	Number
Apples	3
Oranges	5
Bananas	4
Grapes	6

What is the ratio of apples to total fruits?

$\square$: $\square$

Ex 17: The table shows the number of different types of vehicles in a parking lot.

Vehicle	Number
Cars	10
Bicycles	6
Motorcycles	4
Trucks	2

What is the ratio of trucks to total vehicles?

$\square$: $\square$

C EQUAL RATIOS

C.1 MULTIPLYING THE RATIOS

Ex 18: Multiply the ratio by 2:

$3 : 5 =$ $\square$: $\square$

Ex 19: Multiply the ratio by 3:

$4 : 7 =$ $\square$: $\square$

Ex 20: Multiply the ratio by 4:

$5 : 3 =$ $\square$: $\square$

Ex 21: Multiply the ratio by 5:

$2 : 5 =$ $\square$: $\square$

C.2 FINDING THE MISSING VALUE

Ex 22:

$1 : 2 = 2 :$ $\square$

Ex 23:

$2 : 3 =$ $\square$ $: 6$

Ex 24:

$3 : 5 = 9 :$ $\square$

Ex 25:

$4 : 7 =$ $\square$ $: 14$

Ex 26:

$2 : 3 = 8 :$ $\square$

Ex 27:

$3 : 2 =$ $\square$ $: 20$

D PROPORTION

D.1 IDENTIFYING THE PROPORTION

MCQ 28: Two vinaigrettes are being prepared:

- Vinaigrette A is made with 2 mL of oil and 1 mL of vinegar.
- Vinaigrette B is made with 4 mL of oil and 2 mL of vinegar.

Will these two vinaigrettes taste the same?

☐ Yes

☐ No

MCQ 29: On the cement package, it is indicated: 2 kilos of cement for 3 liters of water.
A worker prepares a mixture with 4 kilos of cement and 6 liters of water.
Did he follow the recommended proportions?

☐ Yes

☐ No

MCQ 30: Two smoothie recipes are being prepared:

- Smoothie A is made with 3 cups of fruit and 2 cups of yogurt.
- Smoothie B is made with 6 cups of fruit and 4 cups of yogurt.

Will these two smoothies taste the same?

☐ Yes

☐ No

MCQ 31: A gardener uses a fertilizer mix:

- The recommended mix is 5 grams of fertilizer per 2 liters of water.
- The gardener prepares a mixture with 10 grams of fertilizer and 4 liters of water.

Did the gardener follow the recommended proportions?

☐ Yes

☐ No