

Math Test Study Guide – Worked Examples & Practice

1. Division – Equal Groups

Worked Example: $627 \div 3$

Step 1: Divide hundreds $\rightarrow 6 \div 3 = 2$

Step 2: Bring down 2 $\rightarrow 2 \div 3 = 0$ remainder 2

Step 3: Bring down 7 $\rightarrow 27 \div 3 = 9$

Answer: 209

Sample Word Problem:

A school collected 540 cans of food from 6 classrooms. Each classroom donated the same number of cans.

Solution: $540 \div 6 = 90$ cans

2. Add Fractions – Unlike Denominators

Worked Example: $1/6 + 1/4$

Step 1: Find common denominator $\rightarrow 12$

Step 2: Rewrite fractions $\rightarrow 2/12 + 3/12$

Step 3: Add $\rightarrow 5/12$

Answer: $5/12$

Sample Word Problem:

Liam read $1/3$ of a book in the morning and $1/6$ in the evening. How much did he read in all?

Solution: $1/3 = 2/6 \rightarrow 2/6 + 1/6 = 3/6 = 1/2$

3. Subtract Fractions – Unlike Denominators

Worked Example: $9/10 - 3/5$

Step 1: Rewrite $3/5$ as $6/10$

Step 2: Subtract $\rightarrow 9/10 - 6/10 = 3/10$

Answer: $3/10$

Sample Word Problem:

A ribbon is $7/8$ yard long. $1/4$ yard is cut off. How much ribbon is left?

Solution: $1/4 = 2/8 \rightarrow 7/8 - 2/8 = 5/8$

4. Multiply Fractions & Whole Numbers

Worked Example: $4 \times 6/8$

Step 1: Multiply $\rightarrow 4 \times 6 = 24$

Step 2: Keep denominator $\rightarrow 24/8$

Step 3: Simplify $\rightarrow 3$

Answer: 3

Sample Word Problem:

A baker uses $3/4$ cup of flour for each batch. How much flour is needed for 8 batches?

Solution: $8 \times 3/4 = 24/4 = 6$ cups

5. Add & Subtract Mixed Numbers

Worked Example: $3\frac{3}{4} + 2\frac{1}{8}$

Step 1: Convert $\rightarrow 15/4$ and $17/8$

Step 2: Rewrite $\rightarrow 30/8 + 17/8$

Step 3: Add $\rightarrow 47/8 = 5\frac{7}{8}$

Answer: $5\frac{7}{8}$

Sample Word Problem:

Ken walked $4\frac{1}{2}$ miles and Abby walked $2\frac{3}{4}$ miles. How many miles did they walk in all?

Solution: $4\frac{1}{2} = 9/2 \rightarrow 18/4$; $2\frac{3}{4} = 11/4 \rightarrow 18/4 + 11/4 = 29/4 = 7\frac{1}{4}$