

GRADE 5 MATHEMATICS

MIXED WORD PROBLEMS

Complete Printable Worksheet Pack

- Multi-step problem solving
- Operations & number reasoning
- Fractions, decimals & percentages
- Money, rates & real-life maths
- Measurement & geometry
- Challenge problems

6 worksheets • Separate answer keys • A4 printable

Worksheet 1: Multi-Step Problems

Grade 5 Mathematics

A. Read, plan and solve

1. A school library has 2,450 books. It receives 375 new books and then lends 628 books. How many books are in the library now?

2. A factory packs 48 boxes with 125 pencils in each box. It sends 2,750 pencils to one school. How many pencils remain?

3. A farmer has 3,600 kg of grain. He sells 1,275 kg and divides the rest equally among 5 storage areas. How many kilograms go into each area?

4. A coach buys 8 packs of 24 water bottles. During a tournament, 137 bottles are used. How many bottles are left?

5. A theatre has 36 rows with 28 seats in each row. If 175 seats are empty, how many people are watching the show?

B. Choose the operation

6. A shop receives 15 cartons with 36 notebooks in each carton, then sells 128 notebooks. How many are left?

7. A charity has \$4,800 and spends \$1,275 on food and \$860 on transport. How much money remains?

8. A bus travels 72 km each hour for 4 hours, then travels another 35 km. What total distance does it cover?

Worksheet 2: Operations & Number Reasoning

Grade 5 Mathematics

A. Mixed operations

1. A stadium sold 18,750 tickets on Friday and 21,680 on Saturday. How many tickets were sold altogether?

2. A warehouse has 45,600 items packed equally into 24 large containers. How many items are in each container?

3. A school orders 325 packs of paper. Each pack has 500 sheets. How many sheets are ordered?

4. A company made 96,000 bottles and packed them equally into boxes of 48. How many boxes are needed?

5. A number is 2,400 greater than 18,750. What is the number?

B. Estimate before calculating

6. Estimate $4,982 + 7,135$ by rounding to the nearest hundred. Then find the exact answer.

7. Estimate $39,850 \div 19$ using compatible numbers. Explain why your estimate is reasonable.

8. A student says 398×51 is about 2,000. Is this a reasonable estimate? Explain.

9. Which is closer to 50,000: 248×198 or 300×160 ? Show enough working to justify your answer.

Worksheet 3: Fractions, Decimals & Percentages

Grade 5 Mathematics

A. Real-life problems

1. A recipe needs $\frac{3}{4}$ kg of flour. A baker has already used $\frac{1}{3}$ kg. How much flour is still needed?

2. A tank is $\frac{5}{6}$ full. If $\frac{1}{3}$ of the tank's capacity is used, what fraction of the full tank remains?

3. A runner completes 2.75 km in the morning and 3.625 km in the evening. What total distance does the runner cover?

4. A jacket costs \$80 and is discounted by 25%. What is the sale price?

5. A class has 40 students. 35% choose art club. How many students choose art club?

B. Think carefully

6. Sam says 0.6 is greater than 0.75 because 6 is greater than 7. Explain the mistake.

7. A bottle contains 2.5 L. Maya drinks 0.875 L. How much remains?

8. A student has completed $\frac{3}{5}$ of a project. What percentage of the project is left?

9. Which is greater: $\frac{2}{3}$ or 65%? Show how you know.

Worksheet 4: Money, Rates & Everyday Maths

Grade 5 Mathematics

A. Shopping and money

1. Three notebooks cost \$4.75 each and a pen costs \$2.60. What is the total cost?

2. A shop marks a \$120 backpack down by 15%. What is the discount and the sale price?

3. An item costs \$75. A customer pays with \$100. How much change should they receive?

4. A family spends \$48 on lunch, \$35 on transport and \$72 on tickets. What is the total cost?

5. A store buys a toy for \$40 and sells it for \$52. What is the profit? What is the profit percentage of the cost price?

B. Rates

6. A car travels 180 km in 3 hours. What is its average speed?

7. A cyclist travels 12 km in 40 minutes. At the same speed, how far would the cyclist travel in 2 hours?

8. A printer produces 240 pages in 8 minutes. How many pages per minute does it print?

9. A family uses 18 L of water in 3 days for a certain activity. At the same rate, how much would they use in 10 days?

Worksheet 5: Measurement & Geometry Problems

Grade 5 Mathematics

A. Measure, calculate and reason

1. A rectangular garden is 18 m long and 12 m wide. Find its area and perimeter.

2. A box is 8 cm long, 6 cm wide and 5 cm high. Find its volume.

3. A 3.5 L bottle is used to fill 250 mL cups. How many full cups can be filled?

4. A rectangular floor is 9 m by 7 m. Each square metre needs 4 tiles. How many tiles are needed?

5. A triangular garden has a base of 12 m and a height of 8 m. Using $\text{area} = \frac{1}{2} \times \text{base} \times \text{height}$, find its area.

B. Geometry reasoning

6. A rectangle has an area of 96 cm^2 and a width of 8 cm. What is its length?

7. A square has a perimeter of 44 cm. What is the length of each side and its area?

8. A cuboid has a volume of 240 cm^3 . Its length is 10 cm and width is 6 cm. Find its height.

9. Two rectangles have the same area of 60 cm^2 . One is 10 cm by 6 cm. Give another possible whole-number pair of side lengths.

Worksheet 6: Mixed Word Problems Challenge

Grade 5 Mathematics

A. Challenge problems

1. A school buys 18 boxes of 48 pencils. It gives 125 pencils to each of 6 classes. How many pencils remain?

2. A train travels 240 km in the first 3 hours and 180 km in the next 2 hours. What is its average speed for the whole journey?

3. A shop buys 80 notebooks at \$2.40 each. It sells 60 notebooks at \$3.50 each. What is the shop's profit so far?

4. A tank holds 2,400 L. It is $\frac{3}{4}$ full. Then 350 L are added. How many litres are in the tank now?

5. A rectangular playground is 25 m by 16 m. A path 1 m wide runs all around the inside edge. What is the area of the playground not covered by the path?

B. Explain your reasoning

6. A student calculates $4,800 \div 24 = 200$ and then says $4,800 \div 0.24$ must be 20,000. Is the answer correct? Explain.

7. Which is better value: 3 kg of rice for \$7.50 or 5 kg for \$12.00? Compare the cost per kilogram.

8. A number is multiplied by 6 and then 15 is added. The result is 87. What was the original number?

C. Final challenge

A charity receives \$2,500. It spends 35% on food, 20% on transport and \$450 on supplies. How much money is left?

Worksheet 1 Answer Key

Answer Key

1. 2,197 books.
2. 3,250 pencils.
3. 465 kg per storage area.
4. 55 bottles.
5. 833 people.
6. 412 notebooks.
7. \$2,665 remains.
8. 323 km.

Worksheet 2 Answer Key

Answer Key

1. 40,430 tickets.
2. 1,900 items.
3. 162,500 sheets.
4. 2,000 boxes.
5. 21,150.
6. Estimate 12,100; exact answer 12,117.
7. About 2,000; $39,850 \div 20$ is about 1,993, so the estimate is reasonable.
8. No. 398×51 is about $400 \times 50 = 20,000$.
9. 248×198 is closer to 50,000: it is about 49,104.

Worksheet 3 Answer Key

Answer Key

1. $\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$ kg.
2. $\frac{5}{6} - \frac{1}{3} = \frac{1}{2}$ of the tank remains.
3. 6.375 km.
4. \$60.
5. 14 students.
6. The digits must be compared by place value; $0.75 = 75$ hundredths and $0.6 = 60$ hundredths, so 0.75 is greater.
7. 1.625 L.
8. $\frac{2}{5} = 40\%$ remains.
9. $\frac{2}{3}$ is greater because $\frac{2}{3} \approx 66.7\%$.

Worksheet 4 Answer Key

Answer Key

1. \$16.85.
2. Discount = \$18; sale price = \$102.
3. \$25 change.
4. \$155.
5. Profit = \$12; profit percentage = 30%.
6. 60 km/h.
7. 36 km.
8. 30 pages per minute.
9. 60 L.

Worksheet 5 Answer Key

Answer Key

1. Area = 216 m^2 ; perimeter = 60 m.
2. 240 cm^3 .
3. 14 full cups.
4. 252 tiles.
5. 48 m^2 .
6. 12 cm.
7. Side = 11 cm; area = 121 cm^2 .
8. Height = 4 cm.
9. Examples include $12 \text{ cm} \times 5 \text{ cm}$ or $15 \text{ cm} \times 4 \text{ cm}$.

Worksheet 6 Answer Key

Answer Key

1. 864 pencils remain.
2. Total distance = 420 km; total time = 5 h; average speed = 84 km/h.
3. Cost = \$192; sales revenue = \$210; profit so far = \$18.
4. 2,150 L.
5. Outer area = 400 m²; inner dimensions = 23 m × 14 m; uncovered area = 322 m².
6. No. Dividing by 0.24 is the same as multiplying by 100/24, so $4,800 \div 0.24 = 20,000$. Actually the student's answer is correct; the key is to explain the decimal division carefully.
7. $\$7.50 \div 3 = \$2.50/\text{kg}$; $\$12 \div 5 = \$2.40/\text{kg}$, so the 5 kg option costs less per kilogram.
8. 12.
9. Girls = 600; boys = 650.
10. 35% of \$2,500 = \$875; 20% = \$500; plus \$450 gives \$1,825 spent; \$675 remains.