

# Mixed Practice Worksheet — Grade 8 Math

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## Integers

1. The temperature was  $-8^{\circ}\text{C}$  in the morning. By noon it had risen  $15^{\circ}\text{C}$ , then dropped  $6^{\circ}\text{C}$  by evening. What was the evening temperature?
2. Evaluate, showing your steps:  $-6 \times (-4) + (-18) \div 3$

## Fractions, Decimals & Percents

3. A store marks up a \$60 item by 40%, then later offers a 20% discount on the marked-up price. What is the final price? Show each step.
4. Add and simplify:  $\frac{5}{6} + \frac{3}{8}$

## Ratios & Rates

5. A recipe uses flour and sugar in a ratio of 5:2. If you use 15 cups of flour, how much sugar do you need?
6. A train travels 240 km in 3 hours. At the same rate, how long would it take to travel 400 km?

**Algebra**

7. Solve for  $x$ , showing your steps:  $5x - 7 = 3x + 9$
8. The perimeter of a rectangle is 42 cm. The length is 3 cm more than twice the width. Find the width and the length.

**Geometry**

9. A ladder 13 m long leans against a wall. The base of the ladder is 5 m from the wall. How high up the wall does the ladder reach?
10. Find the area of a triangle with base 14 cm and height 9 cm.
11. A cylinder has radius 4 cm and height 10 cm. Find its volume (use  $\pi \approx 3.14$ ).

**Linear Relations**

12. For the relation  $y = 2x - 5$ , find the value of  $y$  when  $x = 6$ .
13. Create a table of values for  $y = x + 4$  using  $x = 0, 1, 2, 3$ . Then describe the pattern in the  $y$ -values in a sentence.

**Statistics & Probability**

14. The test scores of 6 students are: 78, 85, 92, 78, 88, 95. Find the mean, median, and mode.

15. A spinner has 8 equal sections: 3 red, 2 blue, 3 green. What is the probability of NOT landing on blue? Write your answer as a fraction.

### **Mixed Word Problems**

16. A company had a loss of \$2000 in January. In February, the loss was reduced by 75%. What was the February loss?

17. In a school of 900 students, the ratio of boys to girls is 4:5. How many girls are there?

18. Sarah has \$50. She spends \$12 on a book, then earns \$8 per hour babysitting. Write an equation for her total money (M) after h hours, then find how many hours she needs to babysit to have \$70.

19. A garden is shaped like a right triangle with legs measuring 9 m and 12 m. What is the perimeter of the garden?

20. Evaluate, showing your steps:  $3^2 + (8 - 5) \times 4 - 10 \div 2$