

Name: _____

Date: _____

Mixed Review

Grades 6 – 8 • 50 questions • Show your work

1. $20 \bigcirc 5$

2. $4 \bigcirc -11$

3. What is the **slope** of the line $y = -2x + 2$? _____

4. $|6 - 13| =$ _____

5. A car travels 135 miles on 9 gallons of gas. How many miles per gallon is that? _____

6. $\frac{1}{2} = \frac{x}{6}$ $x =$ _____

7. $\frac{1}{3} \div \frac{1}{6} =$ _____

8. $36 \div 6 - 6 =$ _____

9. $|12 - 15| =$ _____

10. $2.5 \times 10^4 =$ _____

11. $-7 \bigcirc 7$

12. $10 \div (-2) =$ _____

13. $3^{-3} =$ _____

14. $x^6 \times x^7 =$ _____

15. An angle measuring 2° is: _____

16. $3x - 7 = 4x + 0$ $x =$ _____

17. $3 + 4 \times 2 - 5 =$ _____

18. Find the **mean** of 1, 1, 6, 6, 4, 6. _____

19. $\sqrt[3]{343} =$ _____

20. $(3 \times 10^5) \times (3 \times 10^5) =$ _____

21. Two angles are **supplementary**. One measures 108° . Find the other angle.

22. $-8 \bigcirc 14$

23. $3^3 =$ _____

24. Is $\sqrt{44}$ rational or irrational? _____

25. $11 + 12 \times 5 - 3 =$ _____

26. Find the distance between the points $(0, 0)$ and $(15, -8)$. _____

27. An angle measuring 72° is: _____

28. How much is a 25% tip on a \$200 bill? _____

29. A car travels 290 miles on 10 gallons of gas. How many miles per gallon is that? _____

30. Expand: $-2(6x + 6) =$ _____

31. What percent of 130 is 65? _____

32. An angle measuring 90° is: _____

33. Is $\sqrt{109}$ rational or irrational? _____

34. A bag has 1 green and 3 yellow marbles. If one marble is picked at random, what is the probability it is **green**? _____

35. $9(x + 9) = 90$ $x =$ _____

36. $13 + (-1) =$ _____

37. $6^2 =$ _____

38. $19 \bigcirc -12$

39. A cylinder has a radius of 7 cm and a height of 9 cm. Find its **volume** in terms of π . _____

40. Two angles are **supplementary**. One measures 29° . Find the other angle. _____

41. Write **92%** as a decimal. _____

42. Solve the system:

$$2x - y = -6$$

$$x - 4y = -10$$

43. A cylinder has a radius of 2 cm and a height of 7 cm. Find its **volume** in terms of π . _____

44. $3x + 5 = 32$ $x =$ _____

45. y is proportional to x . When $x = 6$, $y = 42$. Find the **constant of proportionality** k . _____

46. $17 \bigcirc 4$

47. $2 - (-9) =$ _____

48. A bag has 4 red and 2 green marbles. If one marble is picked at random, what is the probability it is **red**? _____

49. Find the slope of the line through $(0, -7)$ and $(3, -16)$. _____

50. Solve the system:

$$2x - 3y = 4$$

$$4x + 3y = 26 \quad \underline{\hspace{2cm}}$$

Answer Key – Mixed Review

- | | | |
|--------------------------|------------------------|---------------------------|
| 1. $>$ | 2. $>$ | 3. -2 |
| 4. 7 | 5. 15 | 6. 3 |
| 7. 2 | 8. 0 | 9. 3 |
| 10. $25,000$ | 11. $<$ | 12. -5 |
| 13. $1/27$ | 14. x^{13} | 15. <i>acute</i> |
| 16. -7 | 17. 6 | 18. 4 |
| 19. 7 | 20. 9×10^{10} | 21. 72° |
| 22. $<$ | 23. 27 | 24. <i>irrational</i> |
| 25. 68 | 26. 17 | 27. <i>acute</i> |
| 28. $\$50$ | 29. 29 | 30. $-12x - 12$ |
| 31. 50% | 32. <i>right</i> | 33. <i>irrational</i> |
| 34. $1/4$ | 35. 1 | 36. 12 |
| 37. 36 | 38. $>$ | 39. $447\pi \text{ cm}^3$ |
| 40. 151° | 41. 0.92 | 42. $x = -2, y = 2$ |
| 43. $28\pi \text{ cm}^3$ | 44. 9 | 45. 7 |
| 46. $>$ | 47. 11 | 48. $2/3$ |
| 49. -3 | 50. $x = 5, y = 2$ | |
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