

Cumulative Review (Chapters 1-6)1. Write the expression $2 \cdot r \cdot r \cdot s \cdot s$ using exponents.

1. _____

2. Evaluate $2xy - y^2$ if $x = 6$ and $y = 12$.

2. _____

3. Simplify $3(a + 2b)$.


3. _____

4. Simplify $4m^2 + 2n + p^2 + 3m^2$.

4. _____

5. Write as an equation: twice t decreased by the cube of v equals u .

5. _____

6. Graph $\{\dots, 3, 4, 5\}$ on a number line.6. **Find each sum or difference.**7. $a + (-31)$ if $a = -5$

7. _____

8. $-\frac{2}{3} + \frac{3}{4}$

8. _____

9. $-3.2 - (-8.4)$

9. _____

Simplify.10. $4(2y + y) - 6(4y + 3y)$

10. _____

11. $\frac{12a - 18b}{-6}$

11. _____

Solve each equation.12. $13 - m = 21$

12. _____

13. $\frac{3}{4}x = \frac{2}{3}$

13. _____

14. $4y - 5 = 7y + 6$

14. _____

15. Find three consecutive even integers whose sum is 132.

15. _____

Solve each inequality.16. $r + \frac{5}{6} < \frac{11}{24}$

16. _____

17. $9a - 10 \geq -11a - 42$

17. _____

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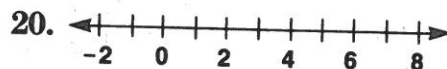
18. Write the compound sentence $x < 2$ and $x > -3$ without *and*.

18. _____

19. Solve the open sentence $|2n - 6| \geq 8$.

19. _____

20. Graph the solution set of the inequality in Exercise 19.



21. Stephanie bought between 2 and 6 bags of potting soil for her plants. The soil cost \$2.79 a bag. What was the total cost of the potting soil?

21. _____

22. Simplify $(2a^2b)(3ab^7)$.

22. _____

23. Simplify $(-2x^2y^3)^4$.

23. _____

24. Simplify $\frac{9m^2n^{-2}}{m^2n}$.

24. _____

25. Evaluate $\frac{3.6 \times 10^{-4}}{1.2 \times 10^{-8}}$. Express the result in scientific notation.

25. _____

26. Ten years ago, Phil was 5 years old. In 5 years, Phil will be twice as old as Tyrone. Tyrone is four years younger than Bernardo. How old is Bernardo now?

26. _____

27. If y varies inversely as x and $x = 15$ when $y = 8$, find x when $y = 12$.

27. _____

28. Find the sum $(4x^2 - 2x + 3) + (6x^2 + x - 2)$.

28. _____

29. Simplify $5(2y^2 + 3y - 2) - 8(3y^2 + 4y - 2)$.

29. _____

30. Find $(a + 6)(a - 5)$.

30. _____

31. Find $(3x + 2y)^2$.

31. _____

32. Solve $6r - (2r + 4) = 12$.

32. _____

33. Tracey Tierney invested \$6,000 for one year, part at 10% annual interest and the balance at 13% annual interest. Her total interest for the year was \$712.50. How much money did she invest at each rate?

33. _____