

Name: _____

6th Grade Accelerated Math - Summer Packet

This packet is a review of all topics you should have mastered upon entering 6th Grade Accelerated Math. Answers will be provided by your Accelerated Math teacher the first week of school. There will be an assessment on the concepts in this packet during the second week of school. You should be able to show all work to get answers without a calculator.

You are not expected to complete this packet on the first day of summer or the last day. Pace yourself and complete a little each week.

1 – 3. Simplify.

1. $9^2 - 4 \cdot 4^2$

2. $(48 - 6) \div 3$

3. $3^3 + 8 \cdot 2^2$

4 – 11. Solve.

4. $2\frac{3}{8} + \frac{3}{5} =$

5. $\frac{6}{9} \times \frac{1}{4} =$

6. $3\frac{1}{3} - 1\frac{5}{9} =$

7. $\frac{6}{7} \div \frac{2}{3} =$

8. $1\frac{1}{3} \div 3\frac{1}{5} =$

9. $\frac{9}{2} \times \frac{6}{27} =$

10. $5\frac{2}{3} + \frac{5}{6} =$

11. $\frac{1}{4} - \frac{3}{8} =$

#12 – 19. Simplify.

12. $-4 - (-5)$

13. $\frac{-14}{2}$

14. $6 + (-4)$

15. $4 \cdot -8$

16. $48 \div -6$

17. $-7 \cdot -6$

18. $-10 - 9$

19. $-9 + 18$

#20 – 22. Evaluate the expression if $x = 3$, $y = -4$, and $z = 6$.

20. $x - 2y^2 + zx$

21. $\frac{4x-3z}{y}$

22. $y(2x^3 + 3z)$

23 – 26. Write an algebraic expression/equation for each verbal expression.

23. a number multiplied by five

24. eight divided by the sum of a number and ten

25. six less than a four times a number

26. Twice a number increased by eleven

#27 – 29. Solve. .

27. $\frac{2}{7} = \frac{24}{x}$

28. $\frac{4}{15} = \frac{x}{90}$

29. Hartford Video rents only Action and Fantasy video games. In one week, they rent 5 Action video games for every 9 Fantasy video games. If they rented 99 Fantasy video games in that week, what was the number of Action video games rented?

30 – 34. Simplify.

30. $90m + 12n - 5m - 4n + 2 + 6$

31. $6x^2 - 3x^3 + 8x^3 - 5y^2 + 4 + 4y + 9$

32. $-2(1 - 5x)$

33. $x(-3x - 2)$

34. $5(x + 2) - 3(x + 6)$

#35 – 40. Solve.

35. $j + 8 = 13$

36. $\frac{x}{6} = -7$

37. $-3w = 27$

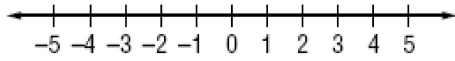
38. $5x - 4 = 26$

39. $7 - 4y = 25$

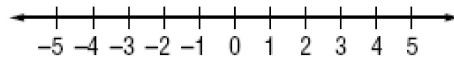
40. $3(x + 2) + 6 = 24$

#41, 42. Graph each inequality on the number line.

41. $b \geq -1$

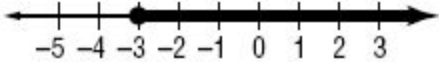


42. $z < 3$

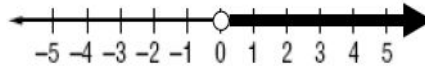


43, 44. Write an inequality for each graph.

43.

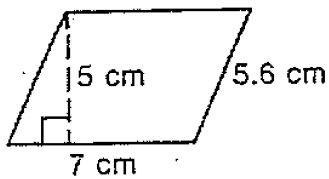


44.

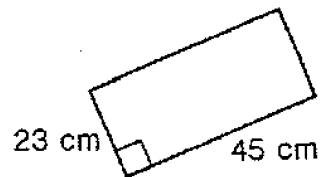


45 – 48. Find the area and perimeter (circumference for circles) for each problem. Use 3.14 for π .

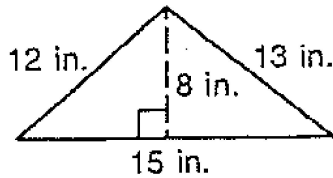
45.



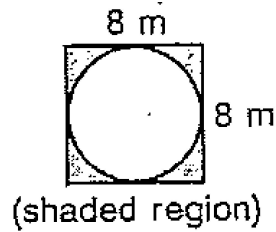
46.



47.



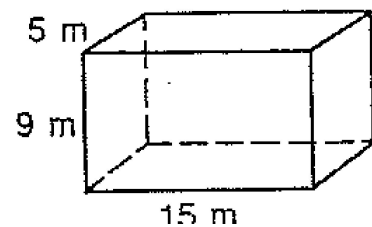
48. Find area **only**.

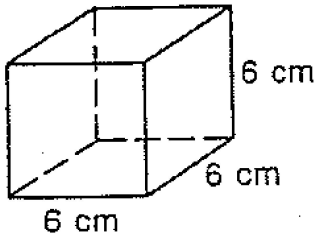


49 – 50. Find the volume and surface area.

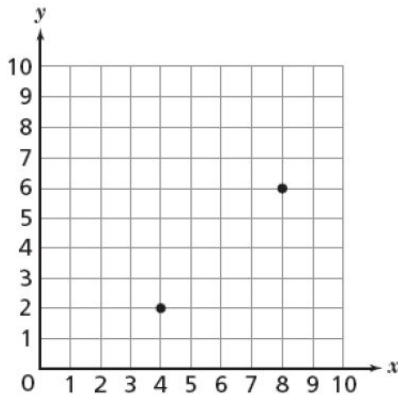
49.

50.



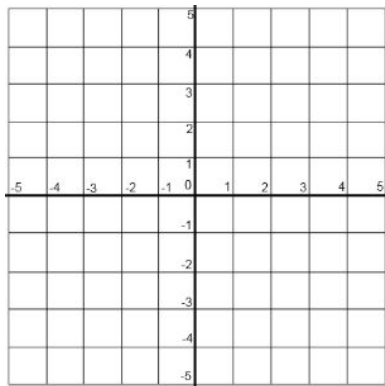


51. Two points are plotted on the graph below:

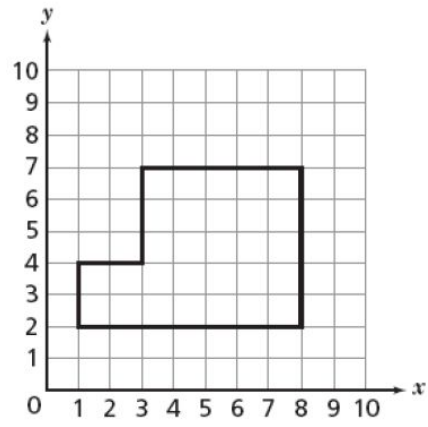


Plot and label two more points and connect them to form a square.

52. Graph and label triangle ABC with vertices $(-1, 3)$, $(4, 3)$ and $(-2, -5)$.



53. A diagram of a classroom floor at Hartford School is drawn on the grid below:



What is the perimeter of the classroom?