

**6<sup>th</sup> Grade Advanced Entering 7<sup>th</sup> Grade**

1. The equation  $5x + 2 = 2 + 5x$  illustrates what property?
2. Simplify  $z + 3(5 - z)$ .
3. Solve the equation  $z$  divided by 3 equals 9.
4. Solve the equation  $-35 = a + (-28)$ .
5. Solve  $0.9x = -14.4$
6. Round 34.6737 to the nearest thousandth
7. Estimate the value of the expression 38.5 divided by 4.22 plus 0.023
8. Write the equation that describes the situation *five more than seven times the number of hours worked daily is sixty-one*.
9. Write the next integer: 3, 8, 18, 38, ...

Use the data below for Exercises 10-12. The Price (per pound) of 8 Types of Fish: 70, 76, 80, 74, 78, 56, 86, 80

10. What is the mean of the data?

11. Identify the mode(s), if any, of the data.

12. What is the median of the data?

13.  $(-5)(-5) \times 8$  divided by  $-4 =$

14. Express 12,800 in scientific notation.

15. Use the formula  $d = rt$  to find the time it takes to drive 78 mi. at 52 mi/h?

16. Evaluate  $0.5x - 2.4y$ , for  $x = 7.2$  and  $y = -3.5$

17. Simplify  $x$  times  $x$  times  $x$  times  $y$  times  $y$  times  $y$  times  $x$  times  $y$ .

18. 843,720 is not divisible by which of the following? 2, 3, 5, or 9 and why? What is the Divisibility Rule

19. Evaluate  $a + b/3a$ , for  $a = 2$  and  $b = 7$

20. Solve the inequality and graph the solution on a number line.  $-2x \geq 6$

21. Use prime factors to find the GCF of 168 and 252.
22. Use prime factors to find the LCM of 168 and 252.
23. Multiply  $7\frac{1}{2}$  times  $2\frac{3}{5}$
24. Simplify:  $14ab$  divided by  $42b$
25. Find the probability that a letter selected at random from the letters in BIRTHDAY is a vowel.
26. Write as a unit rate: a fall of 80 feet in 2.5 seconds.
27. Write a proportion and solve. Three kiwi fruits cost \$.99. Find the cost of 8 kiwi fruits.
28. A soccer uniform that normally sells for \$45.00 is on sale for 30% off. Find the sale price.
29. One computer for every 9 students. Write the ratio in three ways.
30. State if the ratios are equal.  $\frac{6}{12}$  and 1 to 2

31. State if the ratios are equal. 4:14 and 6:24
32. The public library needs 144 square feet of carpeting for its main reading room. The carpet costs \$18.97 for 3 square feet. At this rate, how much will the public library spend on carpeting?
33. Solve the proportion:  $\frac{8}{x} = \frac{12}{6}$
34. At the grocery store, Yuriko bought 4 pounds of plums for \$5.44. What was the price of the plums per pound?
35. At the track meet, Harry set a school record by running the 200 meter race in 25 seconds. How many meters per second did he run?
36. Which is a better value, 3 pounds of apples for \$2.40 or 5 pounds of apples for \$4.25?
37. George buys 10 floppy disks for his computer every 2 months. How many floppy disks will he buy in 7 months?