

Rising 7th Grade Summer Math Practice

INSTRUCTIONS

1. As much as is possible, please show any and all work for each and every problem, showing all steps, or full credit may not be given.
2. Write all answers on lined paper numbered neatly. Make sure your answer is clearly indicated with a circle around your answer.
3. You may use resources such as your parents, siblings, or even the internet if you really get stuck. However, all math work must be in your own handwriting.
4. This will be the first math grade entered for the 2018-19 school year. Bring it with you on the first day of school!
5. Please remember, always do your best work. It is a reflection of you.

Practice Problems (1-60)

1. $520 \div 25 =$

2. $40.6 + 27.84 + 12 =$

3. $3.8 - (2 - 0.18) =$

4. *Estimate the product of $9\frac{5}{8}$ and $11\frac{2}{5}$ by first rounding each mixed*

number to the nearest whole number.

5. *Properly arrange from least to greatest: 0.1, 0, -1, 1*

6. $0.14 \times 0.15 =$

7. $0.14 \div 70 =$

8. $2\frac{1}{2} + 3\frac{1}{6} + 2\frac{1}{3} =$

9. $5\frac{1}{6} - 3\frac{3}{4} =$

10. $3\frac{3}{4} \times 3\frac{1}{3} =$

11. $5\frac{5}{6} \div 2\frac{1}{2} =$

12. $\frac{24x^2y}{40xy^2}$ *reduces to*

13. *Which digit in 50.143 has the same place value as the 7 in 6.8792 ?*

14. $(8 + 10^3)(4 \times 10^4)$

15. *One inch equals 2.54 centimeters. One foot equals how many centimeters?*

16. Formula " $F = 1.8C + 32$ " may be used to convert temperatures in $^{\circ}C$ to $^{\circ}F$. Therefore, $30^{\circ}C = ?$

17. Please write $\frac{1}{25}$ and $\frac{1}{5}$ in fraction and decimal form.

18. $\frac{(2^4)(2^6)}{2^2} =$

19. $\sqrt{5^2 - 3^2} =$

20. Write as a numeral: ten and two hundredths

21. What is the prime factorization of 500?

22. One white, 2 blue and 3 red marbles were in a bag. One marble was drawn from the bag and put back. Then another was drawn. What's the probability that a white marble was drawn both times? Solve as a fraction.

23. $(-6) - (-7)(-4) =$

24. Greg drove 386 miles and used 20 gallons of gas. His car averaged how many miles per gallon?

25. At a 25% off sale, a shirt cost \$36. What was the regular price of the shirt?

26. Janice correctly answered 21 of the 24 questions. What percent of the questions did she answer correctly?

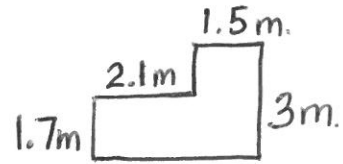
27. $\frac{(2xy)(4x^2y)}{8x^2y} =$

28. If $a = 3$, $b = 4$, and $c = -2$, then $b^2 - 4ac = ?$

29. Draw a quadrilateral that could be labeled as a trapezoid.

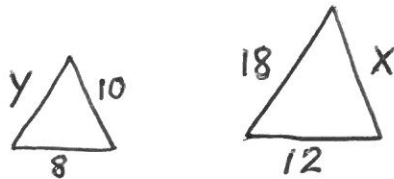
30. What is $33\frac{1}{3}\%$ of \$48?

31. What is the perimeter of this figure? All angles are right angles.



32. Simplify: $2\text{yd. } 2\text{ft. } 7\text{ in.} + 1\text{yd. } 1\text{ft. } 8\text{ in.} =$

33. These two triangles are similar. Find x .



34. $3(x - 3) =$

35. Use a ratio box to solve: After working 6 months, Gina received a raise of 25%. If Gina's previous pay was \$7.20 per hour, what was her hourly pay after the raise?

36. If $3.6 - 0.18 = 7.02$, then n equals

37. The diameter of a circle is 12". What is the area of a 90° sector of the circle? Use 3.14 for π .

38. Jamie ran the first 2000 meters in 6 minutes. At the rate, how long would it take him to run 5000 meters?

39. Evaluate: $\frac{a+b}{c}$ if $a = -6$, $b = -4$, and $c = -2$

40. Solve this proportion: $\frac{2.4}{m} = \frac{3}{4.5}$

41. Sam's first six scores were 90, 80, 90, 80, 80 and 100. What was the median of these scores?

42. Simplify: $\frac{3x \times 3x}{3x + 3x}$

43. If 24 kilograms of seed cost \$37, how much would 42 kilograms cost at the same rate?

44. Write $2\frac{1}{2}\%$ as a fraction and a decimal also.

45. Solve and graph on a number line: $2x + 3 < 5$

46. Multiply and write the product in scientific notation:

$$(3 \times 10^4)(7 \times 10^{-9})$$

47. Simplify: $3^3 - \sqrt{64} + 4 \times 2^4$

48. An arch in the form of a semicircle was over a 40^H wide doorway.

Find the length of the arch to the nearest inch.

49. What is the measure of the angle formed by the hands of a clock at 4:00?

50. Simplify: $100 - \{80 - 3[2 + 2(3^2)]\}$

51. Solve: $1\frac{2}{3}x - 15 = 45$

52. What is the total surface area of a cube that has a 3 inch side?

53. Solve and graph on a number line: $2x + 3 \geq 5$

54. Find the total cost, including 7% tax, of 20 square yards of carpeting priced at \$16 per square yard.

55. Simplify:

$$4x + 2(x + 3)$$

$$\frac{-5(-4) - 3(-2)(-1)}{(-2)}$$

56. *The median of these numbers is how much less than the mean?*

2.0, 0.6, 0.7, 0.85, 5.3

57. *Solve: $3x - 12 = x + 24$*

58. *In rectangle $QRST$, QR is 30 mm and RS is 40 mm. How long is QS ?*

(draw a diagram to help you solve)

59. *Use two unit multipliers to convert 4 ft^2 to square inches.*

60. *Multiply and write the product in scientific notation:*

$(4 \times 10^3)(8 \times 10^{-8})$