

Math Packet Work
Entering Grade 6, MCDS

Name: _____

Directions: Here are review problems from 5th grade math, to ensure you can still use these skills in 6th grade! Ideally, spread the work out over the summer months, doing a few problems each week and looking over past problems to keep the concepts in your mind. Remember that the typed notation might look a bit different (ex= 10^2 means 10 to the second, or 10 with an exponent of 2; $9/10$ is the fraction "nine-tenths" typed in doc form.) Do your best and use your amazing brain to access your prior knowledge!

1. Write the word form of 750,000,000,000 _____
2. Write in Standard Form: $600,000 + 500 + 10 + 6$ _____
3. 240×10^2 (that is 10 to the power of 2!) = _____
4. 30,000,000 divided by 1000 = _____
5. What property is shown by $72 + (8+9) = (72+8) + 9$? _____
6. Write this in standard form: three and three thousandths _____
7. Order the decimals from least to greatest
 $25.387, 25.70, 25.095$ _____ < _____ < _____
8. I am a number greater than 13 and less than 15. My digits are all odd and none of my digits are the same. My thousandths digit is my greatest digit. My hundredths digit is greater than the tenths digit. What number am I? _____
9. Complete the number sentence to show the
Associative Property of Multiplication: $(3 \times 1) \times 8 = \underline{\quad} \times (\underline{\quad} \times \underline{\quad})$
10. Complete the math pattern to find all the products:
 $40 \times 60 = \underline{\quad}$ $400 \times 60 = \underline{\quad}$ $4000 \times 60 = \underline{\quad}$
11. $550 \times 53,281 =$
(show your work!)

12. Complete the division pattern to find all the quotients:

$27,000 \text{ divided by } 3 =$

$27,000 \text{ divided by } 30 =$

$27,000 \text{ divided by } 300 =$

$27,000 \text{ divided by } 3000 =$

13. Which of these numbers are divisible by 2? 24, 53, 96, 257, 92

14. Which numbers are divisible by 5 and 6? Select all that apply!

$\underline{\quad} 50$

$\underline{\quad} 122$

$\underline{\quad} 450$

$\underline{\quad} 971$

$\underline{\quad} 2280$

$\underline{\quad} 4921$

$\underline{\quad} 5250$

$\underline{\quad} 9605$

$\underline{\quad} 57,230$

$\underline{\quad} 80,688$

$\underline{\quad} 93,936$

$\underline{\quad} 560,730$

15. $5861 \text{ divided by } 31 =$ (write it out and show your work)

16. $(5 \times 9) \text{ divided by } 5 + (8 \text{ divided by } 8) =$

17. Marla has 2 pennies, 4 quarters, and 5 dimes. Write an expression that represents how much money Marla has: _____

18. Choose correct prime factorization of 126, and choose all that apply.

$2 \times 9 \times 7$

$2 \times 3 \times 3 \times 7$

$2 \times 3^2 \times 7$

$2^2 \times 3 \times 7$

$3 \times 4 \times 2 \times 3$

$7 \times 3 \times 2 \times 3$

19. Find the GCF's of these sets of numbers (list the factors to find what you need to know!)

16 and 28

Common Factors:

GCF=

8 and 24

Common Factors:

GCF=

8 and 28

Common Factors:

GCF=

20. What is the difference between common factors and common multiples?

21. List the first four common multiples of 2 and 7.

Multiple of 2:

Multiples of 7:

1st 4 common multiples:

NOW, Tell how that information would help you find a common denominator in order to add $\frac{1}{2} + \frac{4}{7}$: _____

22. Write each fractions as a whole number or a mixed number in simplest form.

$8/5$

$11/7$

$28/3$

$26/7$

$7/6$

23. Compare, write $>$, $<$, or $=$

$12/8$ _____ $1 \frac{2}{3}$

24. Interpret a Remainder: A contractor is installing 35 new windows in a house. The windows come in sets of 4. How many sets must be ordered? Explain.

25. Add the following fractions and mixed numbers to get one sum.

$7 \frac{1}{6} + \frac{1}{3} + 2 \frac{1}{4} =$ (hint: align vertically and find the common denominator!)

26. The first level of a house is $10 \frac{4}{9}$ feet tall. The second level of the house is $13 \frac{1}{3}$ feet tall. What is the total height of the house?

27. Find the sum and then rename the Mixed Number Sum

$\frac{1}{3} + 5 \frac{1}{4} + \frac{5}{6} =$

28. Subtract: $5 \frac{1}{6} - 3 =$

29. Subtract: $7 \frac{5}{6} - 4 \frac{2}{5} =$

30. A metal worker is connecting two pipes. One pipe is $3\frac{2}{3}$ ft. The length of the two pipes put together is $5\frac{5}{6}$ feet. How long is the second pipe?

31. What is $\frac{5}{6}$ of 9 (so, $\frac{5}{6} \times 9 =$ _____)

32. Find the product, and then explain how you knew the product would be a value less than the first factor. $\frac{2}{3} \times \frac{2}{3} =$

Explanation: _____

33. Follow the rule to find the greatest common factors of numerators and denominators in order to simplify before multiplying these fractions. This will help you solve the equation. $\frac{5}{12} \times \frac{6}{25} =$

34. Rename this mixed number as an improper fraction: $2\frac{11}{18} =$

35. Multiply (remember to rename the mixed number as an improper fraction first!)
Then give the product in simplest form.

$$\frac{3}{7} \times 14\frac{1}{9} =$$

36. Find the area of a rectangle with these measurements:

$$3\frac{1}{3} \text{ ft by } 5\frac{1}{4} \text{ feet. Area} =$$

37. Reciprocals Write the reciprocal of these fractions:

$$\frac{9}{10} \quad \frac{7}{12} \quad \frac{9}{5} \quad \frac{14}{9}$$

38. Solve the division problem (remember, you must multiply by the reciprocal!)
 $11/5$ divided by $6 =$

39. Bradley feeds his fish $\frac{3}{4}$ of a scoop of food twice a day. The box of fish food will fill 24 full scoops. How many days can Bradley feed his fish with the one box of fish food? Show your work and how you solve! (use a chart?)

40. Combine the decimal addends to find the correct sum.

$$42.75 + 50.8 = \underline{\hspace{2cm}} \quad (\text{align vertically to solve; show work!})$$

41. Add the money amounts to find the whole sum:

$$\$74.53 + \$41.40 + \$39.39 =$$

42. Subtract the money amounts to find the difference:

$$\$67.43 - \$8.44 =$$

43. Multiply by Powers of 10 $0.009 \times 10^6 =$

44. Multiply decimals by decimals. (Remember the rule to count the number of decimal places in both factors and then mark off that many decimal places, in all,

in the product). $2.87 \times 4.35 =$ (align, do your multi-digit multiplication, and then show your product with the correct decimal placement)

45. Divide by powers of 10

8,752,000 divided by $10^3 =$

46. Zeros in Decimal Quotients

Solve: 1.28 divided by 16

47. Division with money

Solve: \$80.85 divided by 55

48. Divide a decimal by a decimal

Solve: 6.45 divided by 0.75

49. Metric Unit Equivalents

1200mm = _____ m

825cm = _____ mm

4.1m = _____ cm

50. Compute with metric unit conversions

$4321\text{cg} - 231.2\text{mg} =$ _____ g (remember to convert units first to subtract with like units, then convert again to get the answer into the correct unit)

51. Draw a regular octagon, and describe in a sentence what makes it an octagon and what makes it regular.

52. What are the ways you can classify a triangle? By its _____ and its _____. Now, draw an isosceles and right triangle.

53. What can you call a parallelogram with four right angles?

54. What is the geometric name for the solid figure shape of a can of soup?

55. Volume Formula $L \times W \times H$

Calculate the volume of a cube that measures 5ft by 5 ft by 5 ft.

BONUS: Make a table and then a graph from the information in this word problem. Then answer the question in the word problem about the truck running out of gas. (hint: use a different color pencil for two different trucks on the graph.)

A large fire truck carries 2000 gallons of water and pumps 250 gallons every minute. A smaller fire truck carries 1000 gallons of water and pumps 95 gallons every minute. During a fire, both start pumping water at the same time. Which truck runs out of water first, and how long does it take for that to happen?

