Blair Christian Academy

Summer Math Packet

Students Entering 8th Grade

Please put the pages in order & staple before submitting to your math teacher on the first day of school (August 29, 2011).

Student Name

_____

Parent Signature

_____

- **Order of Operations**

1. $17 - 6 \cdot 10 \div 2 + 12$

2. $5 \times (8 + 7) + 7$

3. $[2 \cdot (10 + 5)] - 5$

- **Adding Integers**

4. $-10 + 1 + (-6)$

5. $172 + (-167) + (-10) + (-144)$

- **Subtracting Integers**

6. $6 - (-9)$

7. $10 - 19$

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___ I needed some help

___ I did not know what to do and I needed a lot of help. (circle the section)

- **Multiplying and Dividing Integers**

8. $4(-7)$

9. $-4 \cdot 10 \cdot 6$

10. $-88 \div 11$

11. $-95 \div -5$

- **Adding and Subtracting Rational Numbers**

12. $\frac{4}{12} + \frac{9}{12}$

13. $\frac{5}{12} - \frac{12}{6}$

14. $\frac{2}{3} + \frac{1}{11}$

15. $-\frac{17}{9} - \frac{14}{8}$

16. $13\frac{1}{3} - 7\frac{7}{9}$

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- **Multiplying Rational Numbers**

17. $\frac{-4}{7} \cdot \frac{-3}{4}$

18. $\frac{12y}{13} \cdot \frac{11}{24}$

19. $-1\frac{3}{7} \cdot 3\frac{2}{3}$

20. A garden is $14\frac{1}{2}$ ft by $13\frac{1}{4}$ ft. What is the area of the garden?

- **Dividing Rational Numbers**

21. $\frac{2}{9} \div \frac{-3}{27}$

22. $\frac{8}{7} \div \frac{4}{7}$

23. $2\frac{2}{3} \div 1\frac{1}{11}$

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- **Solving One-Step Equations**

24. $y + (-6) = -9$

25. $9b = 27$

26. $8{,}000g = 48{,}000$

27. $\frac{w}{9} = 6$

28. $-5 = \frac{c}{7}$

- **Solving Two-Step Equations**

29. $-6 + 3x = -9$

30. $\frac{x}{5} + 9 = 4$

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Skill #19: Rates
Students will be able to find rates.

91) 60 miles/hr. = _____miles/minute

92) $10.75 for 5 cheeseburgers = $_____ for one cheeseburger.

93) 200 ft./minute = _____ft./second

94) 5 km/hr. = _____meters/minute

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Fractions, Decimals, and Percents, More or Less

Fill in the blank with either an =, ›, or ‹ symbol.

1. $\frac{4}{5}$ ____ 80%
2. $\frac{3}{8}$ ____ 50%
3. 20% _____ 0.2
4. 0.17 ____ 17%
5. 46% ____ $\frac{1}{2}$
6. 81% ____ $\frac{81}{100}$
7. $\frac{3}{4}$ ____ 75%
8. 1.23 ____ 123%
9. 0.33 ___ 30%
10. $\frac{3}{10}$ ____ 30%
11. $\frac{5}{6}$ ___ 95%
12. 15% ___ $\frac{3}{20}$
13. 40% ___ $\frac{2}{5}$
14. 65% ___ 0.65

Decimal Percent (Multiply by 100))

Percent ⟶ Decimal (Divide by 100)

Fraction ⟶ Decimal (numerator ÷ denominator)

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Find the volume of the following cubes and rectangular prisms below **(SHOW ALL WORK!)**

Volume is the capacity (space inside)

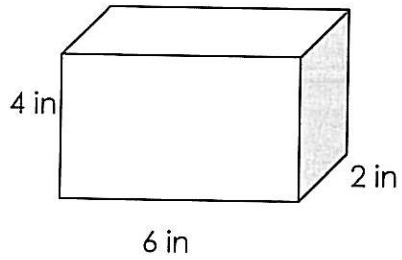
a three dimensional object.

Volume is measured in cubic units (units^3).
Volume of a rectangular prism use...

$$V = l \cdot w \cdot h$$

1) **Identify the measurements.**
2) **Substitute the measurements into the formula.**
3) **Solve the formula.**
4) **Label the units.**

1)

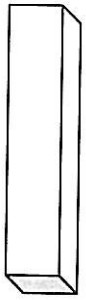


Formula = _____

Substitute = _____

Solve = _____

Formula = _____

2) 

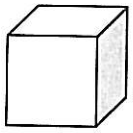
l = 10 ft

w = 2 ft

h = 8 ft

Substitute = _____

Solve = _____

3) 

_____

Formula =

_____

Substitute =

_____

Solve =

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Area and Perimeter

Area of a rectangle = length * width Or A = l * w Or A = b * h

1. Wanda is helping her mother to make a vegetable garden in the shape of a rectangle 4 feet by 8 feet. Draw a rectangle with those dimensions if it helps.

   a. Wanda wants to put a fence around the vegetable garden. How many feet of fence does she need? _____ ft.

   b. What is the area of this garden? (Circle one.)
   32 ft. 144 sq. ft. 32 sq. ft. 24 ft.

   c. Wanda measured the side that is 4 feet long. How many inches is that?_____ in.

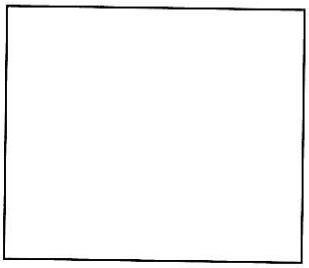
2. Wanda suggested making a flower garden in the shape of a square 6 ft. by 6 ft. Draw a square with those dimensions if it helps.

   a. What will the area and perimeter of this garden be?
   Area_____ Perimeter_____

b. Wanda wants to plant roses at least 3 feet apart. What is the largest number of rose plants she can fit into the square garden? _____

Challenge

3. Divide the square at the bottom of the page into 3 triangles that have the following properties:
   - Two triangles have the same area
   - The third triangle has twice the area of either of the others.



*Classify them as acute, obtuse, right, or straight angles.