

2.3 Multiply and Divide Real Numbers

ALGEBRA

Write your questions here!



MULTIPLY!

INTEGERS

$3 \cdot 5$

$-3(-5)$

$3(-5)$

$-3(5)$

RATIONAL NUMBERS

$7.4(-2.5)$

$-\frac{2}{5} \cdot \frac{3}{4}$

$\left(-\frac{4}{5}\right)^4$

$\left(-1\frac{3}{4}\right)\left(-\frac{4}{3}\right)$

$\sqrt{3(12)}$

COMMUTATIVE PROPERTY OF MULTIPLICATION

ASSOCIATIVE PROPERTY OF MULTIPLICATION

DIVIDE!

INTEGERS

$8 \div 2$

$8 \div (-2)$

$-\frac{8}{2}$

$-\frac{8}{-2}$

RATIONAL NUMBERS

$$12.4 \div (-3.5)$$

$$-\frac{2}{9} \div \frac{4}{9}$$

$$-\frac{3}{5} \div \left(-\frac{2}{3}\right)$$

$$2\frac{3}{4} \div 4$$

$$\left| \frac{-21}{7} \right|$$

TRY IT!

$$\frac{5}{4} \div \left(-\frac{5}{6}\right)$$

$$\left| -\frac{4}{7} \div 3 \right|$$

COMMUTATIVE PROPERTY AND ASSOCIATIVE PROPERTY OF DIVISION ???

BRING THE PAIN!

$$\frac{8x - 12}{4}$$

$$\frac{2x + 9}{3}$$

SUMMARY:

Now,
summarize
your notes
here!



Evaluate each expression. Reduce fractions when possible. Leave as improper fractions.			
1. $4 \cdot 9$	2. $(-2)(-7)$	3. $18 \div (-6)$	4. $\frac{-10}{5}$
5. $\left \frac{20}{4}\right $	6. $ -8(5) $	7. $4.25(-2.4)$	8. $\frac{-7.2}{-3.5}$
9. $-\frac{7}{3}\left(\frac{2}{3}\right)$	10. $\frac{8}{9} \div \left(-\frac{5}{2}\right)$	11. $-\frac{4}{5}\left(-\frac{2}{3}\right)$	12. $\frac{1}{8} \div \left(\frac{3}{2}\right)$
13. $\left(\frac{2}{5}\right)\left(\frac{3}{4}\right)$	14. $-3\left(-\frac{5}{2}\right)$	15. $\left(4\frac{2}{3}\right) \div \left(-3\frac{1}{6}\right)$	16. $2 \div \left(-\frac{5}{4}\right)$
17. $2 8(-5) $	18. $3\left \frac{15}{-5}\right + 5$	19. $4\sqrt{9}$	20. $-3\sqrt{4(9)}$

Circle the correct property.

21. $(8 \cdot 3)4 = 8(3 \cdot 4)$ Commutative Property of Multiplication Associative Property of Multiplication Neither	22. $7(2)6 = 7(12)$ Commutative Property of Multiplication Associative Property of Multiplication Neither	23. $7(9) = 9(7)$ Commutative Property of Multiplication Associative Property of Multiplication Neither
24. $a(9 \cdot b) = (a \cdot 9)b$ Commutative Property of Multiplication Associative Property of Multiplication Neither	25. $xy = yx$ Commutative Property of Multiplication Associative Property of Multiplication Neither	26. $4(2 \cdot 5) = 8 \cdot 20$ Commutative Property of Multiplication Associative Property of Multiplication Neither

Find the error.

27. Mr. Sullivan refuses to believe that the associative property doesn't work for division. He works the following problem to "prove" that it does work. He is wrong. Circle the mistake in his "proof". Correct his "proof" by showing that both sides are NOT equal to each other.

$$16 \div \left(8 \div \frac{1}{2}\right) = (16 \div 8) \div \frac{1}{2}$$

$$16 \div 16 = 2 \div \frac{1}{2}$$

$$1 = 1$$

Simplify the expression. Reduce fractions when possible. Leave as improper fractions.

28. $\frac{6x-14}{2}$

29. $\frac{9z-6}{-3}$

30. $\frac{-6p+15}{6}$

31. $\frac{-10-24a}{-8}$

32. $\frac{36-27c}{9}$

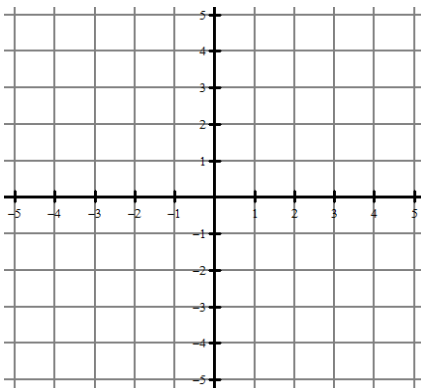
SKILLZ REVIEW

GRAPH

Plot the points:

1. A (-2, 1)

2. B (-3, 0)



SIMPLIFY

3. $\frac{7-10}{9-6}$

4. $\frac{12-(-2)}{5-2}$

ORDER OF OPERATIONS

5. $(-3)^2 - 4 + 7$

6. $\frac{12}{3} + 2(3) - 1$

2.3 Multiply and Divide Real Numbers

APPLICATION

Find the product or quotient.

1. $3.5(4) =$

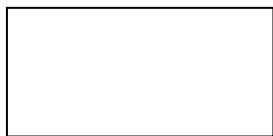
2. $\frac{5}{4} \div \frac{2}{7} =$

Find the area of the following:

3. Rectangle

$A = bh$

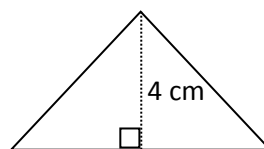
5 feet



$\frac{3}{4}$ feet

4. Triangle

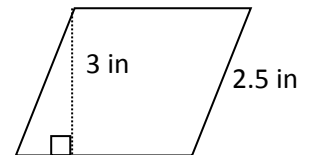
$A = \frac{1}{2}bh$



6.5 cm

5. Parallelogram

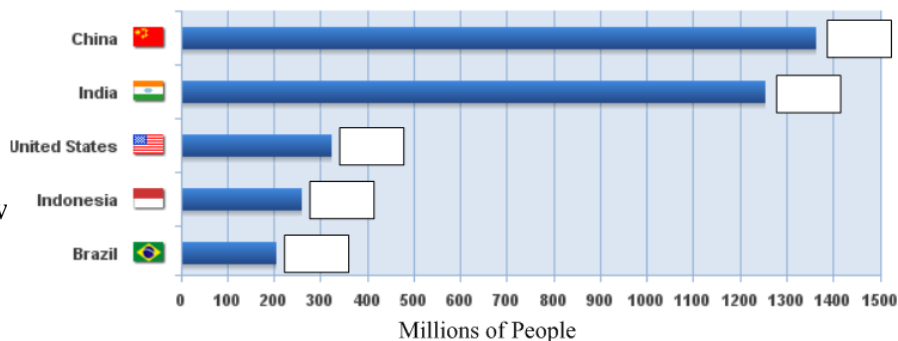
$A = bh$



$2\frac{2}{5}$ in

5 MOST POPULATED COUNTRIES IN THE WORLD

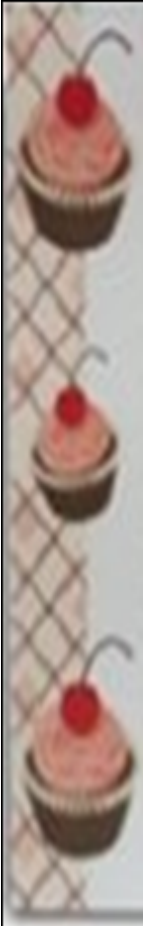
Population in Millions - April 30, 2015



6. Use the bar graph to answer the following:


- Estimate the population of each country. Write your estimate in the box at the end of the each bar of the graph.
- Brazil wants to divide its population into three equal sections. Approximately how many people would be in each section? Label your answer!
- Approximately, how many times bigger was China's population than the United States?
- Write a sentence describing one **uninteresting** thing about the population of the top 5 most populated countries.
- Write a sentence describing one **interesting** thing about the population of the top 5 most populated countries.

7. Mr. Sullivan aka Sully is a well-respected culinary genius in the Cupcake Community where he is affectionately known as Chef-Boy-R-Sully. He is making his famous cupcakes (Sully Cakes) for a birthday party. He wants to triple the recipe. Change the recipe so that it makes three times as much.



Chef-Boy-R-Sully Cupcakes

"Sully Cakes"



<p>Serves 12</p> <ul style="list-style-type: none"> • 2 ¼ cups all purpose flour • 1.5 cups sugar • 3 teaspoons baking powder • ½ teaspoon salt • 1.75 cups of milk • 2 large eggs • 5/4 teaspoon vanilla 	<p>Serves _____</p> <ul style="list-style-type: none"> _____ cups all purpose flour _____ cups of sugar _____ teaspoons of baking powder _____ teaspoon salt _____ cups of milk _____ large eggs _____ teaspoons vanilla
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