

August 27, 2018

Solve

1) $1 - 2x = -7x - 9$
 $1 + 2x + 2x = -7x - 9 + 2x$
 $1 = 5x - 9$
 $+9 +9$
 $10 = 5x$
 $10 \div 5 = 5 \div 5$
 $2 = x$

2) $k/8 = 2$
 $8(\frac{k}{8}) = 2(8)$
 $k = 16$

3) $-2 + x/3 = -4$
 $-6 + x = -12$
 $x = -6$

4) $8x + 4 = -108$
 $8x = -112$
 $x = -14$

Aug 24-7:49 AM

Pre-Algebra - Fractions

Objective: Reduce, add, subtract, multiply, and divide with fractions.

Working with fractions is a very important foundation to algebra. Here we will briefly review reducing, multiplying, dividing, adding, and subtracting fractions. As this is a review, concepts will not be explained in detail as other lessons are.

World View Note: The earliest known use of fraction comes from the Middle Kingdom of Egypt around 2000 B.C.

We always like our final answers when working with fractions to be reduced. Reducing fractions is simply done by dividing both the numerator and denominator by the same number. This is shown in the following example.

FRACTIONS: Reducing Fraction

Example 1:

$\frac{30}{30}$	Both numerator and denominator are divisible by 1
$\frac{36 \div 4}{36 \div 4} = \frac{9}{9}$	Both numerator and denominator are still divisible by 1

Aug 24-7:50 AM

Multiplying Fractions

Example 2:

$\frac{6}{7} \cdot \frac{5}{3}$ Multiply numerators across and denominators across

$\frac{18}{35}$ Our Solution

When multiplying we can reduce our fractions before we multiply. We can either reduce vertically with a single fraction, or diagonally with several fractions, as long as we use one number from the numerator and one number from the denominator.

Example 3:

$\frac{25}{24} \cdot \frac{32}{55}$ Reduce 25 and 55 by dividing by 5. Reduce 32 and 24 by dividing by 8

$\frac{5}{3} \cdot \frac{4}{11}$ Multiply numerators across and denominators across

$\frac{20}{33}$ Our Solution

Dividing fractions is very similar to multiplying with one extra step. Dividing fractions requires us to first take the reciprocal of the second fraction and multiply. Once we do this, the multiplication problem solves just as the previous problem.

Aug 24-7:53 AM

Dividing Fractions

Example 4:

$\frac{21}{16} \div \frac{29}{6}$ Multiply by the reciprocal

$\frac{21}{16} \cdot \frac{6}{29}$ Reduce 21 and 28 by dividing by 7. Reduce 6 and 16 by dividing by 2

$\frac{3}{8} \cdot \frac{3}{4}$ Multiply numerators across and denominators across

$\frac{9}{32}$ Our Solution

To add and subtract fractions we will first have to find the least common denominator (LCD). There are several ways to find an LCD. One way is to find the smallest multiple of the largest denominator that you can also divide the small denominator by.

Example 5:

Find the LCD of 8 and 12. Test multiples of 12

$12 \cdot 1 = 12$ Can't divide 12 by 8

$12 \cdot 2 = 24$ Yes! We can divide 24 by 8!

24 Our Solution

Adding and subtracting fractions is identical in process. If both fractions already have a common denominator we just add or subtract the numerators and keep the denominator.

Adding Fractions

Example 6:

$\frac{7}{8} + \frac{3}{8}$ Same denominator, add numerators $7 + 3$

$\frac{10}{8}$ Reduce answer, dividing by 2

$\frac{5}{4}$ Our Solution

While 1 can be written as the mixed number $1\frac{1}{4}$, in algebra we will almost never use mixed numbers. For this reason we will always use the improper fraction, not the mixed number.

Aug 24-7:53 AM

Subtracting Fractions

Example 7:

$\frac{13}{6} - \frac{9}{6}$ Same denominator, subtract numerators $13 - 9$

$\frac{4}{6}$ Reduce answer, dividing by 2

$\frac{2}{3}$ Our Solution

If the denominators do not match we will first have to identify the LCD and build up each fraction by multiplying the numerators and denominators by the same number to get the denominator to build up to the LCD.

Example 8:

$\frac{5}{6} - \frac{4}{9}$ LCD is 18

$\frac{15}{18} - \frac{8}{18}$ Multiply first fraction by 3 and the second by 2

$\frac{15}{18} - \frac{8}{18}$ Same denominator, add numerators, $15 - 8$

$\frac{7}{18}$ Our Solution

Example 9:

$\frac{2}{3} - \frac{1}{6}$ LCD is 6

$\frac{4}{6} - \frac{1}{6}$ Multiply first fraction by 2, the second already has a denominator of 6

$\frac{4}{6} - \frac{1}{6}$ Same denominator, subtract numerators, $4 - 1$

$\frac{3}{6}$ Reduce answer, dividing by 3

$\frac{1}{2}$ Our Solution

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Aug 24-7:53 AM

0.2 Practice - Fractions

Simplify each. Leave your answer as an improper fraction.

1) $\frac{12}{15} = \frac{4}{5}$

2) $\frac{18}{24} = \frac{3}{4}$

3) $\frac{20}{30} = \frac{2}{3}$

4) $\frac{25}{35} = \frac{5}{7}$

5) $\frac{30}{45} = \frac{2}{3}$

6) $\frac{36}{48} = \frac{3}{4}$

7) $\frac{40}{60} = \frac{2}{3}$

8) $\frac{42}{56} = \frac{3}{4}$

9) $\frac{48}{64} = \frac{3}{4}$

10) $\frac{54}{72} = \frac{3}{4}$

11) $\frac{60}{84} = \frac{5}{7}$

12) $\frac{63}{84} = \frac{3}{4}$

13) $\frac{66}{88} = \frac{3}{4}$

14) $\frac{70}{105} = \frac{2}{3}$

15) $\frac{72}{108} = \frac{2}{3}$

16) $\frac{75}{100} = \frac{3}{4}$

17) $\frac{80}{120} = \frac{2}{3}$

18) $\frac{84}{112} = \frac{3}{4}$

19) $\frac{88}{121} = \frac{8}{11}$

20) $\frac{90}{120} = \frac{3}{4}$

Find each product.

21) $(-\frac{2}{3})(-\frac{1}{4}) = \frac{2}{12} = \frac{1}{6}$

22) $(-\frac{3}{5})(-\frac{2}{7}) = \frac{6}{35}$

23) $(-\frac{4}{6})(-\frac{1}{2}) = \frac{4}{12} = \frac{1}{3}$

24) $(-\frac{5}{8})(-\frac{3}{4}) = \frac{15}{32}$

25) $(-\frac{6}{10})(-\frac{1}{5}) = \frac{6}{50} = \frac{3}{25}$

26) $(-\frac{7}{9})(-\frac{2}{3}) = \frac{14}{27}$

27) $(-\frac{8}{12})(-\frac{1}{4}) = \frac{8}{48} = \frac{1}{6}$

28) $(-\frac{9}{15})(-\frac{2}{5}) = \frac{18}{75} = \frac{6}{25}$

29) $(-\frac{10}{18})(-\frac{3}{6}) = \frac{30}{108} = \frac{5}{18}$

30) $(-\frac{11}{22})(-\frac{1}{3}) = \frac{11}{66} = \frac{1}{6}$

31) $(-\frac{12}{24})(-\frac{1}{4}) = \frac{12}{96} = \frac{1}{8}$

32) $(-\frac{13}{26})(-\frac{1}{2}) = \frac{13}{52} = \frac{1}{4}$

33) $(-\frac{14}{35})(-\frac{1}{5}) = \frac{14}{175} = \frac{2}{25}$

34) $(-\frac{15}{40})(-\frac{1}{8}) = \frac{15}{320} = \frac{3}{64}$

35) $(-\frac{16}{48})(-\frac{1}{6}) = \frac{16}{288} = \frac{1}{18}$

Aug 24-7:53 AM

Find each quotient:

37) $-2\frac{1}{2} \div -2\frac{1}{4} = -2 \cdot \frac{4}{3} = -\frac{8}{3}$

38) $-\frac{2}{3} \div \frac{1}{6} = -\frac{2}{3} \cdot \frac{6}{1} = -4$

39) $\frac{1}{2} \div \frac{3}{4} = \frac{1}{2} \cdot \frac{4}{3} = \frac{2}{3}$

40) $-2\frac{1}{2} \div \frac{1}{3} = -\frac{5}{2} \cdot \frac{3}{1} = -7\frac{1}{2}$

41) $1\frac{1}{2} \div \frac{1}{2} = \frac{3}{2} \cdot \frac{2}{1} = 3$

42) $\frac{1}{3} \div \frac{1}{6} = \frac{1}{3} \cdot \frac{6}{1} = 2$

43) $\frac{1}{4} \div \frac{1}{8} = \frac{1}{4} \cdot \frac{8}{1} = 2$

44) $\frac{1}{2} \div \frac{1}{3} = \frac{1}{2} \cdot \frac{3}{1} = \frac{3}{2}$

45) $\frac{1}{3} \div \frac{1}{4} = \frac{1}{3} \cdot \frac{4}{1} = \frac{4}{3}$

46) $\frac{1}{2} \div \frac{1}{5} = \frac{1}{2} \cdot \frac{5}{1} = \frac{5}{2}$

47) $-\frac{1}{2} \div \frac{1}{3} = -\frac{1}{2} \cdot \frac{3}{1} = -\frac{3}{2}$

48) $-\frac{2}{3} \div \frac{1}{4} = -\frac{2}{3} \cdot \frac{4}{1} = -\frac{8}{3}$

49) $-\frac{1}{2} \div \frac{1}{5} = -\frac{1}{2} \cdot \frac{5}{1} = -\frac{5}{2}$

50) $\frac{1}{3} \div \frac{1}{4} = \frac{1}{3} \cdot \frac{4}{1} = \frac{4}{3}$

51) $\frac{1}{2} \div \frac{1}{3} = \frac{1}{2} \cdot \frac{3}{1} = \frac{3}{2}$

Evaluate each expression:

52) $\frac{1}{2} + (-\frac{1}{3}) = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

53) $\frac{1}{3} + (-\frac{1}{4}) = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$

54) $\frac{1}{4} + (-\frac{1}{5}) = \frac{5}{20} - \frac{4}{20} = \frac{1}{20}$

55) $\frac{1}{5} + (-\frac{1}{6}) = \frac{6}{30} - \frac{5}{30} = \frac{1}{30}$

56) $\frac{1}{6} + (-\frac{1}{7}) = \frac{7}{42} - \frac{6}{42} = \frac{1}{42}$

57) $\frac{1}{7} + (-\frac{1}{8}) = \frac{8}{56} - \frac{7}{56} = \frac{1}{56}$

58) $(-2) + (-\frac{3}{4}) = -2\frac{3}{4}$

59) $(-1) + (-\frac{1}{2}) = -1\frac{1}{2}$

60) $(-1) + (-\frac{1}{3}) = -1\frac{1}{3}$

61) $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

62) $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

63) $\frac{1}{4} + \frac{1}{5} = \frac{5}{20} + \frac{4}{20} = \frac{9}{20}$

64) $(-2) + \frac{1}{3} = -1\frac{2}{3}$

65) $1 + (-\frac{1}{2}) = \frac{1}{2}$

66) $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

67) $(-1) + \frac{1}{3} = -\frac{2}{3}$

68) $\frac{1}{3} - \frac{1}{4} = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$

69) $\frac{1}{4} + \frac{1}{5} = \frac{5}{20} + \frac{4}{20} = \frac{9}{20}$

70) $\frac{1}{5} - \frac{1}{6} = \frac{6}{30} - \frac{5}{30} = \frac{1}{30}$

71) $(-1) - \frac{1}{2} = -1\frac{1}{2}$

72) $(-1) + (-\frac{1}{3}) = -1\frac{1}{3}$

73) $0 - \frac{1}{2} = -\frac{1}{2}$

74) $(-6) + (-\frac{1}{3}) = -6\frac{1}{3}$

75) $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

76) $(-1) - (-\frac{1}{2}) = -1 + \frac{1}{2} = -\frac{1}{2}$

77) $(-\frac{1}{2}) + \frac{1}{3} = -\frac{3}{6} + \frac{2}{6} = -\frac{1}{6}$

78) $(-\frac{1}{3}) + (-\frac{1}{4}) = -\frac{4}{12} - \frac{3}{12} = -\frac{7}{12}$

79) $(-1) - (-\frac{1}{2}) = -1 + \frac{1}{2} = -\frac{1}{2}$

80) $(-\frac{1}{2}) + (-\frac{1}{3}) = -\frac{3}{6} - \frac{2}{6} = -\frac{5}{6}$

81) $\frac{1}{3} - (-\frac{1}{4}) = \frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

82) $\frac{1}{4} - (-\frac{1}{5}) = \frac{1}{4} + \frac{1}{5} = \frac{5}{20} + \frac{4}{20} = \frac{9}{20}$

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Aug 24-7:54 AM

August 28, 2018

simplify

1) $8 * (1/3) = \frac{8}{1} \cdot \frac{1}{3} = \frac{8}{3}$

2) $(1/6) / (1/3) = \frac{1}{6} \cdot \frac{3}{1} = \frac{1}{2}$

3) $1/3 + 2/3 = \frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$

4) $1/6 - 2/3 = \frac{1}{6} - \frac{4}{6} = -\frac{3}{6} = -\frac{1}{2}$

Aug 27-10:03 AM

Quiz Review

5) $-x + \frac{x}{3} = -4$
 $\frac{-3x + x}{3} = -4$
 $\frac{-2x}{3} = -4$
 $-2x = -12$
 $x = 6$

3) $8(\frac{k}{8}) = 218$
 $k = 16$

15) $1 - 2x = -7x - 9$
 $-1 + 5x = -9$
 $5x = -10$
 $x = -2$

18) $4(a-1) + 8(b+a) = -4$
 $4a - 4 + 8b + 8a = -4$
 $12a + 8b - 4 = -4$
 $12a + 8b = 0$
 $12a = -8b$
 $a = -\frac{2}{3}b$

17) $7 + 8(6x+3) = 175$
 $7 + 48x + 24 = 175$
 $31 + 48x = 175$
 $48x = 144$
 $x = 3$

Aug 28-8:53 AM

Fraction Word Problems

Mary needs to order pizza for 18 students. Each student should get $\frac{1}{4}$ of a pizza. How many pizzas should Mary order? How much pizza will be left over?
 she needs to order 5 pizzas and she going to make $1/2$ $18 \cdot \frac{1}{4} = 4.5$

Two friends want to share 3 apples so that they each get the same amount. How much would each friend get?
 $\frac{12}{3} = 4$

Jared has one pizza that has 12 slices. He wants to share his pizza with his two brothers. How many slices will each boy have if they each have an equal amount?
 $\frac{3}{4} = .75$

Frank has 3 bags of birdseed. He wants to put the birdseed into 4 bird feeders equally. How much of the bags will go in each feeder?
 She needs 4.25
 She needs 1.25 more $\text{\$}9.97$

Aug 24-7:51 AM

Mario was making cookies. He mixed $2\frac{1}{2}$ cups of flour, $1\frac{1}{4}$ cups of sugar and $\frac{1}{2}$ cup of brown sugar together in a bowl. How many cups did he have altogether?
 $4 + 3 - 2 = 5$

Becky has 5 candy bars. She wants to share them with 3 friends. How much will each friend get?
 $4 + 3 - 2 = 5$
 Becky gets \$5.00 a week for chores, and helps with chores for 4 weeks. If Becky wants to spend only half of her money, how much will she have left to save?
 $4 + 3 - 2 = \text{beckey has } \$25 \text{ dollars and } 25$

Becky has 4 quarters. Becky's mom gives her 3 more. Becky spends 2 of them on candy. How many quarters does Becky have left?
 Has five quarters $4 + 3 - 2$ becky

Travis has 13 pieces of gum that he wants to share with his 2 friends. If Travis and his friends split the gum equally, how many pieces will they each get?
 friend friend T
 ||||, ||||, ||||
 They each get 4 pieces and there is 1 left.
 $\frac{13}{2} = 4.33 = 4\frac{1}{2}$

Aug 24-7:51 AM

Mario was making cookies. He mixed $2\frac{1}{2}$ cups of flour, $1\frac{1}{4}$ cups of sugar and $\frac{1}{2}$ cup of brown sugar together in a bowl. How many cups did he have altogether?
 John 64

Becky has 5 candy bars. She wants to share them with 3 friends. How much will each friend get?
 Multi-Step Problems

Kim had 4 chocolate chip cookies and 3 sugar cookies. Kim's sister ate two of her chocolate chip cookies. How many cookies are left?
 Joe 15

Becky gets \$5.00 a week for chores, and helps with chores for 4 weeks. If Becky wants to spend only half of her money, how much will she have left to save?
 Travis has 13 pieces of gum that he wants to share with his 2 friends. If Travis and his friends split the gum equally, how many pieces will they each get?

Aug 24-7:51 AM

Fraction Word Problems

<p>#1 Jessica bought $\frac{8}{9}$ of a pound of chocolates and ate $\frac{1}{3}$ of a pound. How much was left?</p>	<p>#2 Tom bought a board that was $\frac{7}{8}$ of a yard long. He cut off $\frac{1}{2}$ of a yard. How much was left?</p>
<p>#3 Sam rode his bike $\frac{2}{5}$ of a mile and walked another $\frac{3}{4}$ of a mile. How far did he travel?</p>	<p>#4 Sally walked $\frac{3}{4}$ of a mile before lunch and $\frac{1}{2}$ of a mile after lunch. How far did she walk in all?</p>
<p>#5 Don bought $\frac{3}{4}$ of a pound of jellybeans and $\frac{5}{8}$ pound of gummy bears. How much candy did he buy?</p>	<p>#6 The track is $\frac{3}{5}$ of a mile long. If Tyrone jogged around it twice, how far did he run?</p>
<p>#7 Which apple weighs more, one that weighs $\frac{2}{3}$ of a pound or one that weighs $\frac{5}{6}$ of a pound?</p>	<p>#8 Stanley ordered two pizzas cut into eighths. If he ate $\frac{5}{8}$ of a pizza, how much was left?</p>
<p>#9 Sandra bought $2\frac{1}{2}$ yards of red fabric and $1\frac{1}{4}$ of blue. How much cloth did she buy in all?</p>	<p>#10 An equilateral triangle measures $3\frac{1}{2}$ inches on one side. What is the perimeter of the triangle?</p>

Developed by Laura Cauder at Teaching Resources (<http://home.ett.net/~teaching/>)

Aug 24-9:13 AM

August 29, 2018

Write a fraction you can

- 1) add
- 2) subtract
- 3) multiply
- 4) divide

That is four different problems...

Aug 27-7:43 AM

FOA Name: _____ ID: 1
Date: _____ Period: _____

More simplifying radicals

Simplify:

1) $\sqrt{50}$	2) $\sqrt{125}$
3) $\sqrt{45}$	4) $\sqrt{18}$
5) $\sqrt{100}$	6) $-4\sqrt{56}$
7) $-2\sqrt{16}$	8) $4\sqrt{100}$
9) $2\sqrt{50}$	10) $3\sqrt{45}$
11) $\sqrt{48p^2}$	12) $\sqrt{45x}$
13) $\sqrt{125a}$	14) $\sqrt{64r^2}$

Aug 24-9:15 AM

15) $\sqrt{8a}$	16) $-4\sqrt{75a^2}$
17) $4\sqrt{125b^2}$	18) $4\sqrt{32x}$
19) $4\sqrt{20a^2}$	20) $4\sqrt{80a^2}$
21) $\sqrt{32x^2y^2}$	22) $\sqrt{45ma^2}$
23) $\sqrt{75ab}$	24) $\sqrt{18xy}$
25) $\sqrt{18r^2s^2}$	26) $-5\sqrt{45a}$
27) $-4\sqrt{80a^2b^2}$	28) $-4\sqrt{12x^2y}$
29) $-4\sqrt{8ab}$	30) $-\sqrt{45x^2y^2}$

Aug 24-9:15 AM

Comparing and Ordering Whole Numbers

Sometimes it is not easy to tell one butterfly from another. Sometimes it is difficult to tell numbers apart, too.

To compare numbers with the same number of digits:

- Determine which has the larger **first number** (the digit furthest left). For example, 420 is larger than 240 because 4 is larger than 2.

To compare numbers that have a different number of digits:

- Look at the **place values** of each number. The number that extends the furthest to the left is the larger number. For example, 240 is larger than 85 because 2 is further to the left than 8 when placed on a place value chart. The number 2 in 240 has a higher place value.

Example

Comparing and ordering the populations of countries around the world involves working with large numbers.

Rammet and Azim noted the following numbers from their textbook:

13 395 000 15 058 800 20 100 000

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Aug 24-9:17 AM

A place value chart, like the one below, can help order and compare the numbers recorded by Rammet and Azim.

Place Value									
One Billions	Hundred Millions	Ten Millions	One Millions	Hundred Thousands	Ten Thousands	One Thousands	Hundreds	Tens	Ones
	1	3	3	9	5	0	0	0	0
	1	5	0	5	8	6	0	0	0
	2	0	1	0	0	0	0	0	0

2 has a value greater than 1, so 20 100 000 has the greatest value. 5 has a value greater than 3, so 15 058 800 has the second greatest value.

20 100 000 > 15 058 800 > 13 395 000

Practice: Comparing and Ordering Whole Numbers

1. Bill is keeping a log of the books that he reads and the number of pages in each book. Here is his list for the month of May.

The Mercator Incident — 4 205 pages
Screening Danger — 788 pages
Fighting Times — 878 pages
Temp Below — 1145 pages
Mission Achieved — 250 pages
Aweesome Antics — 154 pages.


Put these books in order from least to greatest according to the number of pages.

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2. Melba is pricing used cars. She is interested in the following models:


1994 Honda	\$2500.00
1999 Mazda	\$7550.00
1988 Datsun	\$5025.00
2003 Saturn	\$6950.00
1996 Toyota	\$3600.00



Place the cars in order from highest price to lowest price.

3. Judy's social studies class is studying economics. Students were asked to form groups and invest the same amount of pretend money in a variety of stocks. Judy's group purchased 8 different stocks and, by the end of the activity, had earned the following amounts of money:

Investment 1	\$ 7935.00
Investment 2	\$ 17 672.00
Investment 3	\$ 62 450.00
Investment 4	\$ 6502.00
Investment 5	\$ 89 032.00
Investment 6	\$ 28 782.00



Which investment was the best choice during this period of time?
Which was the poorest choice?

List the investments in order from the one that made the least amount of money to the one that made the greatest amount of money.

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Aug 24-9:17 AM

4. Find a partner to work with. Each of you needs a copy of the charts below.

The Challenge: Race to the finish!

The first person to fill in both charts correctly wins the race. Compare your answers with your partner. Discuss and correct any errors.

Complete the following chart by filling in the number that belongs in each place value.

Place Value	Place		Value	
	Hundred Millions	Ten Millions	One Million	Ten Thousands
2500				2
10 300				5
1 650 975				0
840 000				0
3 000 000				
210 000 000				
52 000				

Place the values in order from LEAST to GREATEST in the chart below. Be sure to include the example.

Least					Greatest

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Aug 24-9:17 AM

5. Place the numbers in order from LEAST to GREATEST.

a. 2340 3564 2168 2975 3529

b. 23 642 23 662 21 728 20 963 32 529

c. 312 320 431 565 426 190 322 112 398 945

6. Place the numbers in DECREASING ORDER.

a. 1 435 612 3 100 395 3 099 875 1 299 580 2 355 315

b. 63 745 324 63 345 743 73 126 843 61 737 843 72 513 853

c. 3 435 612 5 100 395 5 099 875 3 299 580 4 355 315

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Aug 24-9:18 AM

Worksheet on Comparing Decimal Numbers

Name _____ Date _____

Period _____

Compare the following numbers using <, >, or =.

1) 4.5 ___ 4.05 2) 3.007 ___ 3.070 3) 5.67 ___ 5.76

4) 43.90 ___ 43.9 5) 0.235 ___ 2.304 6) 7.91 ___ 9.17

7) 14.4 ___ 14.38 8) 0.33 ___ 0.033 9) 0.05 ___ 0.050

Write the numbers in order from least to greatest.

10) 3.224; 2.432; 3.422 11) 8.5; 8.58; 5.8 12) 6.21; 6.02; 6.12

Write the number in order from greatest to least.

13) 0.005; 0.5; 0.05 14) 7.8; 7.88; 7.088 15) 3.04; 3.6; 3.4

Aug 24-9:21 AM

Comparing and Ordering Rational Numbers

Name _____

Fill in each blank with <, >, or = to make each sentence true.

1. $\frac{2}{3}$ ___ $\frac{5}{8}$ 2. 0.03 ___ 0.003 3. 1.1 ___ 1.05

4. $\frac{1}{2}$ ___ 0.44 5. -2.75 ___ -2.5 6. -3/4 ___ -.75

Write the numbers in order from least to greatest.

7. $\frac{3}{8}$, $\frac{1}{4}$, $\frac{2}{5}$ 8. 0.44, 3/8, 0.5, 2/5 9. 0.2, 4/15, 0.21, 1/4


10. -2.1, 0.5, -0.5, $\frac{1}{100}$ 11. -10, 2, -0.5, $\frac{1}{16}$

12. $4\frac{1}{2}$, $-\frac{3}{2}$, $-2\frac{1}{16}$ 13. 4.12, $-4\frac{1}{2}$, $-\frac{17}{4}$

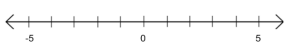
Aug 24-9:22 AM

#14 18: Put the following numbers on the number lines given.


14. -5, -2, -5.5, 3




15. $\frac{3}{2}$, $2\frac{1}{2}$, -2



16. $\frac{3}{4}$, 0, -3, 0.75, -1.8, -3.5



17. $1\frac{3}{7}$, 2.5, 3.5, -2.2, $4\frac{2}{9}$, $-\frac{30}{6}$



Aug 24-9:22 AM

FOA Name _____ ID: 1
 more practice simplifying radicals
 Date _____ Period _____

Simplify:

1) $\sqrt{125}$	2) $\sqrt{12}$
3) $\sqrt{18}$	4) $\sqrt{56}$
5) $\sqrt{50}$	6) $\sqrt{50a}$
7) $\sqrt{27a^3}$	8) $\sqrt{12x^2}$
9) $\sqrt{27a^2}$	10) $\sqrt{50a^2}$
11) $\sqrt{100a^2b^4}$	12) $\sqrt{384x^3y}$
13) $\sqrt{48x^3y^2}$	14) $\sqrt{288a^4b^2}$

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Aug 24-9:23 AM

15) $\sqrt{128a^2b^3}$	16) $\sqrt{80ap^2q^3}$
17) $\sqrt{75xy^2}$	18) $\sqrt{18x^2y^2z^2}$
19) $\sqrt{12pq^2r}$	20) $\sqrt{125mnp^2}$

Simplify these problems ON YOUR OWN, then turn them in. Thanks!











21) $\sqrt{98p^2q^2r^2}$	22) $\sqrt{63}$
23) $\sqrt{216a^2b^3}$	24) $\sqrt{64x^2y^2}$
25) $\sqrt{75m}$	26) $\sqrt{8x^3}$
27) $\sqrt{200a^2b^2p^2}$	28) $\sqrt{32m^3n}$

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

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FOA Name _____ ID: 1
 Area, Volume & Surface Area
 Date _____ Period _____

Name each figure.













1) 	2) 
3) 	4) 
5) 	6) 
7) 	8) 
9) 	10) 

Find the area of each.



11) 	12) 
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




13) 	14) 
15) 	16) 
17) 	18) 
19) 	20) 
21) 	22) 
23) 	24) 

Find the volume of each figure. Round to the nearest tenth.







25) 	26) 
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Aug 24-9:26 AM

27) 	28) 
29) 	30) 
31) 	32) 

Find the surface area of each figure. Round to the nearest tenth.

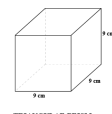
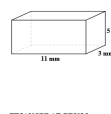
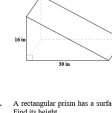
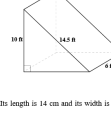
33) 	34) 
35) 	36) 
37) 	38) 

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Geometry 2 - Unit Seven: Surface Area & Volume, Practice

In Problems #1 - #4, find the surface area and volume of each prism.

1. CUBE 	2. RECTANGULAR PRISM 
3. TRIANGULAR PRISM 	4. TRIANGULAR PRISM 

- A rectangular prism has a surface area of 448 cm². Its length is 14 cm and its width is 6 cm. Find its height.
- A cylinder has a radius of 12 cm and a height of 15 cm. Find its surface area and volume. Express your answer in terms of π, or round your answer to two decimal places.
- A cylinder has a diameter of 10 in and a height of 5 in. Find its surface area and volume. Express your answer in terms of π, or round your answer to two decimal places.
- A cylinder has a radius of 7.5 mm and a height of 12.5 mm. Find its surface area and volume. Express your answer in terms of π, or round your answer to two decimal places.

Aug 24-9:27 AM