

Adding Fractions

$$\frac{1}{2} + \frac{1}{3} = ?$$

$$\frac{1 \times 3}{2 \times 3} = \frac{3}{6} \quad \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

Show all work. Simplify if possible. Refer to the example problem to the right if necessary.

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

2. $\frac{3}{5} + \frac{1}{2} =$

3. $\frac{1}{3} + \frac{1}{10} =$

4. $\frac{9}{10} + \frac{1}{2} =$

5. $\frac{1}{3} + \frac{2}{4} =$

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

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

8. $\frac{3}{4} + \frac{1}{2} =$

9. $\frac{5}{10} + \frac{2}{3} =$

10. $\frac{2}{4} + \frac{1}{3} =$

Subtracting Fractions

$$\frac{7}{8} - \frac{5}{16} = ?$$

Show all work. Simplify if possible. Refer to the example problem to the right if necessary.

$$\frac{7 \times 2}{8 \times 2} - \frac{5}{16} = \frac{14}{16} - \frac{5}{16} = \frac{9}{16}$$

$$1. \quad \frac{3}{5} - \frac{1}{2} =$$

$$2. \quad \frac{6}{10} - \frac{1}{2} =$$

$$3. \quad \frac{2}{3} - \frac{1}{4} =$$

$$4. \quad \frac{8}{10} - \frac{1}{4} =$$

$$5. \quad \frac{1}{2} - \frac{5}{10} =$$

$$6. \quad \frac{7}{10} - \frac{2}{4} =$$

$$7. \quad \frac{3}{5} - \frac{1}{8} =$$

$$8. \quad \frac{2}{5} - \frac{1}{10} =$$

$$9. \quad \frac{1}{5} - \frac{1}{10} =$$

$$10. \quad \frac{3}{4} - \frac{2}{5} =$$

Adding Decimals

Line up the decimal points...

$$\begin{array}{r} 3.21 \\ + 4.5 \\ \hline 7.71 \end{array}$$

and just drag that decimal point straight down!

Add as usual!

Show all work. Refer to the example problem to the right if necessary.

1. $76.79 + 82.88 =$	2. $12.21 + 9.27 =$
3. $82.73 + 44.6 =$	4. $2.99 + 9.3 =$

Subtracting Decimals

Line up the decimal points...

$$\begin{array}{r} 8.97 \\ - 2.82 \\ \hline 6.15 \end{array}$$

and just drag that decimal point straight down!

Subtract as usual!

Show all work. Refer to the example problem to the right if necessary.

1. $7.63 - 3.11 =$	2. $20.34 - 4.5 =$
3. $19.342 - 17.01 =$	4. $24 - 3.145 =$

Multiplying Fractions

Show all work. Simplify if possible. Refer to the example problem to the right if necessary.

$$\frac{2}{5} \times \frac{6}{7} = \frac{2 \times 6}{5 \times 7} = \frac{12}{35}$$

$$\frac{1}{4} \times \frac{2}{3} = \frac{1 \times 2}{4 \times 3} = \frac{2}{12} = \text{reduces to } \frac{1}{6}$$

1. $\frac{7}{8} \times \frac{2}{4} =$	2. $\frac{10}{12} \times \frac{3}{4} =$
3. $\frac{8}{9} \times 5 =$	4. $\frac{2}{7} \times \frac{9}{8} =$

Dividing Fractions

Show all work. Simplify if possible. Refer to the example problem to the right if necessary.

Dividing Fractions

$$\frac{1}{3} \div \frac{3}{5}$$

Reciprocal: **Rewrite:** **Multiply:**

$$\frac{3}{5} \times \frac{5}{3}$$

$$\frac{1}{3} \cdot \frac{5}{3}$$

$$\frac{1 \cdot 5}{3 \cdot 3} = \frac{5}{9}$$

1. $\frac{5}{8} \div \frac{3}{4} =$	2. $5 \div \frac{3}{4} =$
3. $\frac{4}{5} \div 8 =$	4. $\frac{2}{5} \div \frac{2}{5} =$

Multiplying Decimals

$3.77 \times 2.8 = ?$

$$\begin{array}{r} 3.77 \text{ (2 decimal places)} \\ \times 2.8 \text{ (1 decimal place)} \\ \hline 3016 \\ +754 \\ \hline 10.556 \text{ (3 decimal places)} \end{array}$$

Show all work. Refer to the example problem to the right if necessary.

1. $0.5 \times 10 =$

2. $2.5 \times 0.4 =$

3. $1.25 \times 8 =$

4. $2.6 \times 1.05 =$

5. $0.38 \times 19 =$

6. $4.23 \times 12.3 =$

Dividing Decimals

$$\begin{array}{r} 1.32 \\ 7 \overline{)9.24} \\ \underline{7} \\ 22 \\ \underline{21} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

Show all work. Refer to the example problem to the right if necessary.

1. $4.5 \div 2 =$

2. $3 \div 0.04 =$

3. $1.9 \div 2.3 =$

4. $10.54 \div 5 =$

5. $0.25 \div 1.4 =$

6. $9 \div 0.03 =$

Fraction, Decimal, Percent Conversions

Write each percent as a decimal. Round to the thousandths place if necessary.

1) 90%

2) 30%

3) 115.9%

4) 9%

5) 7%

6) 65%

7) 0.3%

8) 445%

Write each decimal as a percent. Round to the nearest tenth of a percent if necessary.

9) 0.452

10) 0.006

11) 0.002

12) 0.05

13) 4.78

14) 0.1

15) 3.63

16) 0.03

Write each percent as a fraction. Simplify if possible.

17) 25%

18) 70%

19) 93%

20) 58%

21) 50%

22) $66.\overline{6}\%$

23) 20%

24) 80%

25) 71%

26) 30%

Write each fraction as a percent. Use repeating decimals when necessary.

27) $\frac{1}{2}$

28) $\frac{1}{8}$

29) $\frac{2}{3}$

30) $\frac{1}{100}$

31) $2\frac{1}{10}$

32) $\frac{3}{8}$

33) $\frac{1}{10}$

34) $\frac{87}{100}$

Calculating Unit Rates

Show work on the next page!

Finding unit Rates

When the denominator of a rate is 1, we call the rate a **unit rate**. We usually use the key word **per** or the division symbol / to indicate a unit rate. For example:

If a student earns \$8.50 per hour, it is the same as \$8.50/hour, and means \$8.50 for every 1 hour of work.

Find each unit rate. Round your answer to the nearest hundredth.

1. type 800 words in 12 minutes _____ words per minute	2. 192 students in 4 buses _____ in each bus
3. 357 miles in 5 hours _____ miles per hour	4. 8 ducks for \$23.60 \$_____ per duck
5. a 10-lb bag of cherries for \$33.49 _____ per lb	6. 12 chickens lay 30 eggs _____ eggs per chicken
7. Earn \$134 in 8 hours _____ per hour	8. 3 pizzas for \$19.99 _____ each
9. 3500 calories for 6 servings of pie _____ calories per serving	10. 351 chairs in 27 rows _____ chairs in each row
11. \$37.29 for 2 pairs of jeans. _____ each	12. \$37.29 for 2 pairs of ducks _____ per duck
13. 24 senior citizens in 12 RVs _____ in each RV	14. 7 penguins for \$188.88 _____ each

Which is the better buy?

15. A 12.5 oz bag of Doritos for \$3.79 or a 3 oz bag for \$1.00.
16. 12 bars of soap for \$10.00 or 5 bars of soap for \$4.00.
17. A box of 84 penguins for \$13,597 or a bag of 50 penguins for \$795.95.
18. 5 gallon bucket of paint for \$97.45 or a 1 gallon bucket of paint for 21.95.
19. 48oz big gulp for \$1.39 or a 32 oz coke for \$.89.
20. 50 head of cattle for \$24,500 or 37 head of cattle for \$18,870

One Step Equations

1) $26 = 8 + v$

2) $3 + p = 8$

3) $15 + b = 23$

4) $-15 + n = -9$

5) $m + 4 = -12$

6) $x - 7 = 13$

7) $m - 9 = -13$

8) $p - 6 = -5$

11) $-104 = 8x$

12) $14b = -56$

13) $-6 = \frac{b}{18}$

14) $10n = 40$

$$15) \frac{v}{8} = 2$$

$$16) 16 = \frac{k}{11}$$

$$17) -15x = 0$$

$$18) -17x = -204$$

$$19) 21 = -7n$$

$$20) \frac{m}{4} = -13$$

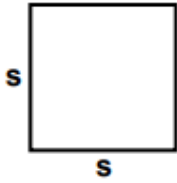
$$21) -126 = 14k$$

$$22) -143 = -11x$$

Geometry

Area and Perimeter of Shapes

1)

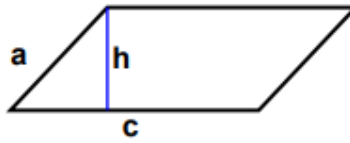


$s = 58 \text{ ft}$

Area: _____

Perimeter: _____

2)

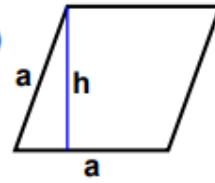


$a = 44.02 \text{ mm}$
 $c = 99 \text{ mm} \quad h = 41 \text{ mm}$

Area: _____

Perimeter: _____

3)

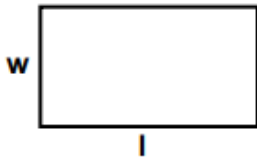


$a = 61 \text{ yds} \quad h = 57.32 \text{ yds}$

Area: _____

Perimeter: _____

4)

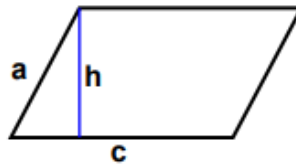


$l = 89 \text{ inches} \quad w = 49 \text{ inches}$

Area: _____

Perimeter: _____

5)

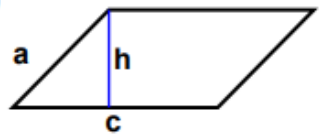


$a = 55.47 \text{ cm}$
 $c = 91 \text{ cm} \quad h = 53 \text{ cm}$

Area: _____

Perimeter: _____

6)



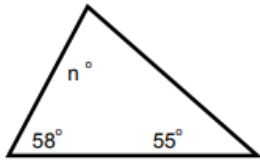
$a = 44.19 \text{ ft}$
 $c = 84 \text{ ft} \quad h = 40 \text{ ft}$

Area: _____

Perimeter: _____

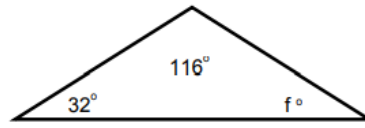
Solving for Missing Angles in Triangles

1. Find the value of the missing angle.



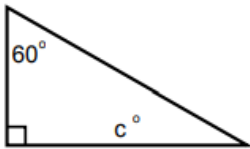
$$n = \underline{\hspace{2cm}}$$

2. Find the value of the missing angle.



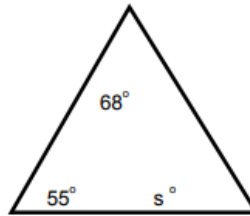
$$f = \underline{\hspace{2cm}}$$

3. Find the value of the missing angle.



$$c = \underline{\hspace{2cm}}$$

4. Find the value of the missing angle.

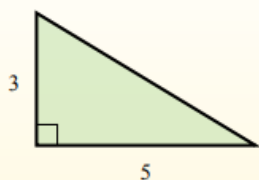


$$s = \underline{\hspace{2cm}}$$

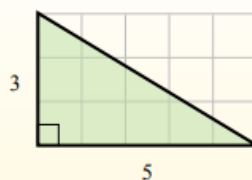
Calculating the Area of Triangles

Use the explanation below to find the areas of the following triangles.

The area of a **right** triangle is half the area of the rectangle that would surround it.



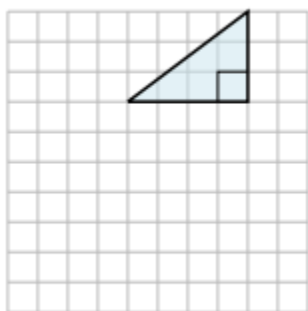
In this example, the surrounding rectangle would have an area of 15 blocks ($15 b^2$).



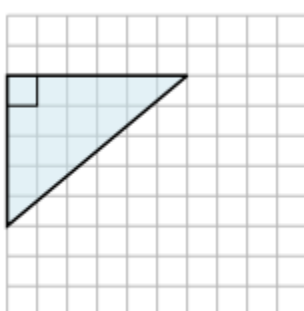
Half of 15 is 7.5
This **right** triangle has an area of $7.5 b^2$.

y

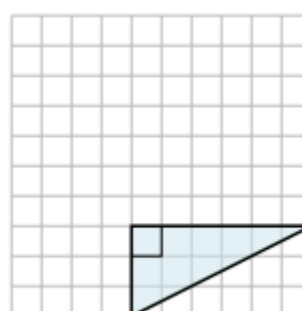
1)



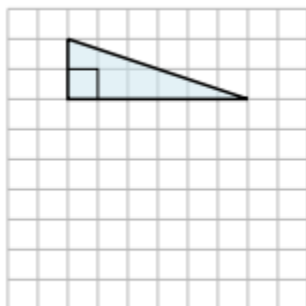
2)



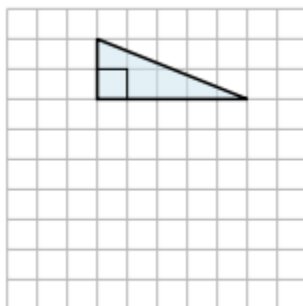
3)



4)



5)



6)

