

Why Is a Good Grade in Algebra Like a Puppy in Antarctica ?



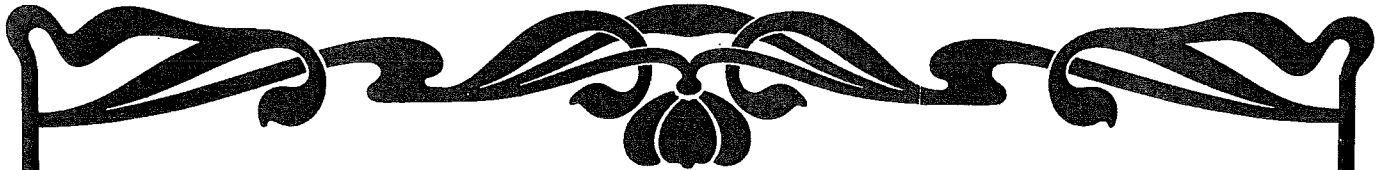
Solve each problem and find your answer in the rectangle below. Cross out the box that contains your answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

1	If there are 560 calories in 8 ounces of meat, how many calories are in 3 ounces of meat? _____ calories
2	If 2 cubic feet of sawdust weigh 25 pounds, how much do 9 cubic feet of sawdust weigh? _____ pounds
3	A certain hose delivers 5 gallons of water in 24 seconds. How much water will the hose deliver in 10 minutes? _____ gallons
4	The ratio of the weight of an object on Mars to its weight on Earth is 9 to 25. If a person weighs 120 pounds on Earth, how much would the person weigh on Mars? _____ pounds
5	A flagpole casts a shadow 8.5 meters long. If an algebra student 1.6 meters tall casts a shadow 2.0 meters long at the same time and location, how tall is the flagpole? _____ meters
6	A U.S. nickel is composed of 3.9 grams of copper and only 1.2 grams of nickel. How many kilograms of copper must be combined with 4 kilograms of nickel in the manufacture of nickel coins? _____ kilograms
7	At a certain college, the ratio of men to women is 6 to 5. If there are 2580 men, how many women are there? _____ women
8	In a town of 30,000 households, a survey was taken to estimate the number of households in which a certain TV program had been viewed. Of the 200 residences surveyed, the program had been seen in 64. Assuming that this was a representative sample, estimate the total number of households in the town in which the program was viewed. _____ households

PU	I	NA	PS	TS	A	DO
125	14.2	9600	43.2	8800	13	41.5
IT	GO	T	NI	OD	RA	CE
210	132	6.8	2230	112.5	2150	7.3

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When the Snake Charmer Married the Undertaker, What Did They Have Monogrammed on Their Towels ?



Solve each problem below. Find your answer in the answer column and notice the letter next to it. Write this letter in each box that contains the number of that problem.

<p>① After taking his girl friend out to dinner, Osgood decides to leave a tip of 15% of the bill. If the bill is \$38, how much should the tip be? \$ _____</p>	<p>(M) $36\frac{2}{3}$</p>
<p>② Profits of Calculus Corporation this year were 140% of profits last year. If profits last year were \$5200, what were profits this year? \$ _____</p>	<p>(H) 1.5</p> <p>(R) 12,500</p>
<p>③ Klutz got 10 out of 16 problems on an algebra test correct. What percent were correct? _____ %</p>	<p>(I) 5.70</p> <p>(T) 4.25</p>
<p>④ A team won 13 games, lost 15 games, and tied 2 games. What percent of its games did the team win? _____ %</p>	<p>(D) $62\frac{1}{2}$</p> <p>(N) 40,000</p>
<p>⑤ In a magazine drive a school keeps 40% of all sales dollars. How many dollars worth of magazines must be sold for the school to earn \$5000. \$ _____</p>	<p>(A) 7280</p> <p>(O) 7160</p>
<p>⑥ A real estate broker earns $2\frac{1}{2}\%$ of her sales as a commission. How many dollars in sales does she need in order to earn a commission of \$1000? \$ _____</p>	<p>(S) $32\frac{1}{2}$</p> <p>(L) 36,000</p>
<p>⑦ A steel cable expands 0.2% of its length when its temperature is increased 100°C. How much longer will a 750 meter cable become with this increase in temperature? _____ m</p>	<p>(E) $43\frac{1}{3}$</p>
<p>⑧ Elmo Buckets made 54 out of 80 free throws. What percent did he miss? _____ %</p>	

7	1	8	8	2	6	3	7	4	2	5	8	4
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#128

① Cal 02.
 $\frac{560}{x} = \frac{8}{3}$
 x = 210 cal.

② cubic ft wght
 $\frac{2}{9} = \frac{25}{x}$
 x = 112.5 lbs

③ gal Sec
 $\frac{5}{x} = \frac{24}{10.60}$
~~xxxx~~ x = 125 gal.

④ Mars Earth
 $\frac{9}{x} = \frac{25}{120}$
 x = 43.2 lbs

⑤ shadow hght
 $\frac{2}{8.5} = \frac{1.6}{x}$
 x = 6.8 m

⑥ Copper Nickel
 $\frac{3.9}{x} = \frac{1.2}{4000}$
 x = 13,000 gm
 13 Kg

⑦ Men Women
 $\frac{6}{2580} = \frac{5}{x}$
 x = 2150 women

⑧ people's homes watched
 $\frac{200}{30000} = \frac{64}{x}$
 x = 9600 homes

#136

① what is 15% of 38
 $\frac{x}{38} = \frac{15}{100}$ * $\frac{15}{100} = \frac{7}{100}$
 x = \$5.7

② what is 140% of 5200
 $\frac{x}{5200} = \frac{140}{100}$ x = \$7280

③ 10 is what % of 16?
 $\frac{10}{16} = \frac{x}{100}$ x = 62.5%

④ total = 30
 what 13 is what % of 30?
 $\frac{13}{30} = \frac{x}{100}$ x = 43.3%

⑤ 40% of what num. is 5000?
 $\frac{5000}{x} = \frac{40}{100}$ x = \$12,500

⑥ what is 2.5% of 1000?
 $\frac{1000}{x} = \frac{2.5}{100}$ x = \$40,000

⑦ what is .2% of 750?
 $\frac{x}{750} = \frac{.2}{100}$ x = 1.5 m

⑧ 54 is what percent of 80?
 $\frac{54}{80} = \frac{x}{100}$ x = 67.5%
 Made
 80 - 54 = 26 shots missed
 $\frac{26}{80} = \frac{x}{100}$ 100 - 67.5 = 32.5%
 Missed

Alg 1

Sec 2-6 Proportions

Name _____

7. **RACE** Jennie ran the first 6 miles of a marathon in 58 minutes. If she is able to maintain the same pace, how long will it take her to finish the 26.2 miles?

8. **CCSS PRECISION** On a map of North Carolina, Raleigh and Asheville are about 8 inches apart. If the scale is 1 inch = 12 miles, how far apart are the cities?

30. **CAR WASH** The B-Clean Car Wash washed 128 cars in 3 hours. At that rate, how many cars can they wash in 8 hours?

31. **GEOGRAPHY** On a map of Florida, the distance between Jacksonville and Tallahassee is 2.6 centimeters. If 2 centimeters = 120 miles, what is the distance between the two cities?

32. **CCSS PRECISION** An artist used interlocking building blocks to build a scale model of Kennedy Space Center, Florida. In the model, 1 inch equals 1.67 feet of an actual space shuttle. The model is 110.3 inches tall. How tall is the actual space shuttle? Round to the nearest tenth.

33. **MENU** On Monday, a restaurant made \$545 from selling 110 hamburgers. If they sold 53 hamburgers on Tuesday, how much did they make?

40. **ATHLETES** At Piedmont High School, 3 out of every 8 students are athletes. If there are 1280 students at the school, how many are not athletes?

41. **BRACES** Two out of five students in the ninth grade have braces. If there are 325 students in the ninth grade, how many have braces?

42. **PAINT** Joel used a half gallon of paint to cover 84 square feet of wall. He has 932 square feet of wall to paint. How many gallons of paint should he purchase?

43. **MOVIE THEATERS** Use the table at the right.

a. Write a ratio of the number of indoor theaters to the total number of theaters for each year.

~~b. Do any two of the ratios you wrote for part a form a proportion? If so, explain the real world meaning of the proportion.~~

b. Use the values in 2009 to predict the number of indoor and outdoor theaters there will be in 2010 if the total in 2010 is 40,000.

Year	Indoor	Drive-In	Total
2003	35,361	634	35,995
2004	36,012	640	36,652
2005	37,092	648	37,740
2006	37,776	649	38,425
2007	38,159	635	38,794
2008	38,201	633	38,834
2009	38,605	628	39,233

Source: North American Theater Owners

44. **DIARIES** In a survey, 36% of the students said that they kept an electronic diary. There were 900 students who kept an electronic diary. How many students were in the survey?

Alg 1

Sec 2-6 Proportions

Name Key

7. RACE Jennie ran the first 6 miles of a marathon in 58 minutes. If she is able to maintain the same pace, how long will it take her to finish the 26.2 miles?

$$\begin{array}{c} \text{Mile} \qquad \text{Min} \\ \frac{6}{26.2} = \frac{58}{x} \end{array} \qquad 253.2\bar{6} \text{ ~~minutes~~ } \text{ Minutes}$$

8. CCSS PRECISION On a map of North Carolina, Raleigh and Asheville are about 8 inches apart. If the scale is 1 inch = 12 miles, how far apart are the cities?

$$\begin{array}{c} \text{Inch} \qquad \text{Mile} \\ \frac{1}{8} = \frac{12}{x} \end{array} \qquad 96 \text{ Miles}$$

30. CAR WASH The B-Clean Car Wash washed 128 cars in 3 hours. At that rate, how many cars can they wash in 8 hours?

$$\begin{array}{c} \text{Cars} \qquad \text{Hours} \\ \frac{128}{x} = \frac{3}{8} \end{array} \qquad 341.\bar{3} \text{ Cars}$$

31. GEOGRAPHY On a map of Florida, the distance between Jacksonville and Tallahassee is 2.6 centimeters. If 2 centimeters = 120 miles, what is the distance between the two cities?

$$\begin{array}{c} \text{cm} \qquad \text{Mile} \\ \frac{2}{2.6} = \frac{120}{x} \end{array} \qquad 156 \text{ Miles}$$

32. CCSS PRECISION An artist used interlocking building blocks to build a scale model of Kennedy Space Center, Florida. In the model, 1 inch equals 1.67 feet of an actual space shuttle. The model is 110.3 inches tall. How tall is the actual space shuttle? Round to the nearest tenth.

$$\begin{array}{c} \text{In} \qquad \text{Ft} \\ \frac{1}{110.3} = \frac{1.67}{x} \end{array} \qquad 184.201 \text{ Ft.}$$

33. MENU On Monday, a restaurant made \$545 from selling 110 hamburgers. If they sold 53 hamburgers on Tuesday, how much did they make?

$$\begin{array}{c} \$ \qquad \text{HB} \\ \frac{545}{x} = \frac{110}{53} \end{array} \qquad \$262.59$$

40. ATHLETES At Piedmont High School, 3 out of every 8 students are athletes. If there are 1280 students at the school, how many are not athletes?

$$\frac{\text{Ath. } 3}{x} = \frac{\text{ALL } 8}{1280}$$

480 Athletes
1280 - 480 = 800 Non-Athletes

41. BRACES Two out of five students in the ninth grade have braces. If there are 325 students in the ninth grade, how many have braces?

$$\frac{\text{Braces } 2}{x} = \frac{\text{ALL } 5}{325}$$

130 have braces

42. PAINT Joel used a half gallon of paint to cover 84 square feet of wall. He has 932 square feet of wall to paint. How many gallons of paint should he purchase?

$$\frac{\text{gal } .5}{x} = \frac{\text{sq. ft } 84}{932}$$

5.54 gal
buy 6 gallons

43. MOVIE THEATERS Use the table at the right.

- a. Write a ratio of the number of indoor theaters to the total number of theaters for each year.
b. Do any two of the ratios you wrote for part a form a proportion? If so, explain the real-world meaning of the proportion.

Year	Indoor	Drive-In	Total
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35361/35995 .982
36012/36652 .982
37092/37740 .982
37776/38425 .983
38159/38794 .9836
38201/38834 .9838
38605/39233 .9840

Source: North American Theater Owners

b. Use the values in 2009 to predict the number of indoor and outdoor theaters there will be in 2010 if the total in 2010 is 40,000

Indoor total

$$\frac{2009 \quad 38605}{2010 \quad x} = \frac{39233}{40,000}$$

39360 Indoor

Outdoor

$$\frac{2009 \quad 628}{2010 \quad x} = \frac{39233}{40,000}$$

640 outdoor

44. DIARIES In a survey, 36% of the students said that they kept an electronic diary. There were 900 students who kept an electronic diary. How many students were in the survey?

900 is 36% of what number

$$\frac{900}{x} = \frac{36}{100}$$

2500