

① Determine which size is the best buy. 15 oz for \$6.15 or 10 oz for \$4.00

A 15

B 10

C Equal

D not enough information

② Find fraction notation for the ratio. You need not simplify

0.5 to 0.9

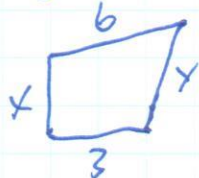
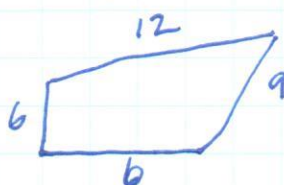
A $0.9/0.4$

B $0.4/0.9$

C $0.5/0.9$

D $0.9/0.5$

③ Solve. This problem is a proportion equation. Show your work accordingly. The sides in the pair of figures are proportional. Find the missing length or lengths.



④ Tim's car will go 280 miles on 14 gallons of gas in city driving. What is the rate in miles per gallon?

A 19.5 mpg

B $1/20$ mpg

C 20.5 mpg

D 20 mpg

⑤ Find fraction notation for the ratio. Simplify to lowest terms.

A baseball ~~game~~ team has played 9 games so far this season. The team has won 6 games. What is the ratio of games won to games played so far. Show work!

⑥ Determine whether the two pairs of numbers are proportional

3, 8, and 9, 21

O yes

O NO

⑦ write the specified ratio as a simplified fraction

Bob is 30 years old, and Susan is 24 yrs old. Find the ratio of his age to hers. A $4/5$

B $30/24$

C $5/4$

D $1/6$

⑧ $\frac{1}{2} = \frac{x}{7}$

A $3\frac{1}{2}$

B 7

C $1/14$

D 14

⑨ Find fraction notation for the ratio. You need not simplify. In a three point shooting contest, a basketball player attempted 15 shots and made 12 of them. What is the ratio of shots made to shots attempted.

A $15/2$

B $12/15$

C $3/5$

D $15/3$

⑩ Find the rate, or speed, as a ratio of distance to time. Round to the nearest hundredth when necessary

- A 40m/sec
- B 5m/sec
- C 35m/sec
- D 175m/sec

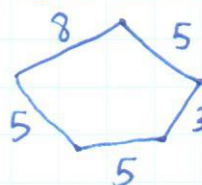
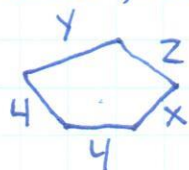
⑪ On Anne's bicycle, the ratio of pedal turns in second gear is 4 to 7. If her rear wheel turns 289 times per mi, how many times does she turn the pedal in one mile?

- A 896
- B 508
- C 893
- D 1,555.8

⑫ Find the ratio of the first number to the second and simplify
54 to 102

- A $\frac{9}{17}$
- B $\frac{9}{102}$
- C $\frac{17}{102}$
- D $\frac{54}{102}$

⑬ The sides of the pair of figures are proportional. Find the missing length or lengths.



- A $x=2, y=6, z=3$
- B $x=3, y=6, z=4$
- C $x=1.5, y=7, z=3.5$
- D $x=2.4, y=6.4, z=4$

⑭ Jeff started playing QB for his college team last season. Last season, he completed 302 passes of 458 passes attempted. This season he completed 337 of 503 passes attempted. Use cross products to determine whether the completion rate for last season is the same as the completion rate for this season

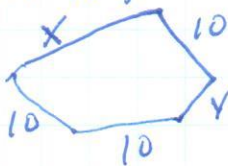
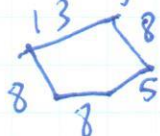
- O Yes
- O No

⑮ Find fraction notation for the ratio. You need not simplify

At an advertising agency that employs 231 people, 143 employees receive 3 weeks of paid vacation year. Find the ratio of those who rec. 3 weeks of paid vac. to those whose paid vac. is not 3 weeks.

- A $\frac{143}{88}$
- B $\frac{88}{231}$
- C $\frac{88}{143}$
- D $\frac{231}{88}$

⑯ The sides in the pair of figures are proportional. Find the missing length or lengths.

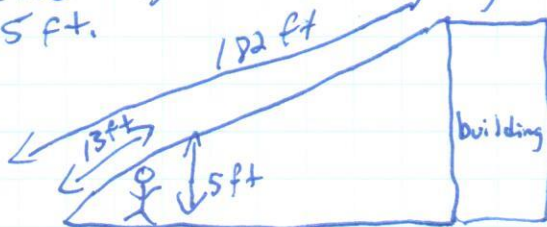


- A $x=15.75, y=6.25$
- B $x=16.25, y=6.75$
- C $x=16.5, y=6.5$
- D $x=16.25, y=6.25$

- (8) Solve. $\frac{18}{7} = \frac{9}{\frac{1}{2}}$
- A 4
 B 81
 C 1
 D 9
- (9) Solve. $\frac{m}{5.5} = \frac{2.03}{3.85}$
- A 14.8
 B 5.5
 C 29.0
 D 2.9

- ② In Base ball, the average number of earned runs given up by a pitcher in 9 innings is the pitcher's earned run average (ERA). For example, if a pitcher allows 90 earned runs in 250 innings, his ERA is found by solving the proportion $\frac{\text{ERA}}{9} = \frac{90}{250}$. Find the ERA for a pitcher who gives up 81 earned runs in 230 innings. Round your answer to the nearest hundredth.
- A 2.84
B 25.56
C 3.17
D 9.00

- (23) Find the height of the building below. Assume that the height of the person is 5 ft.
- 
- A 36.4 ft



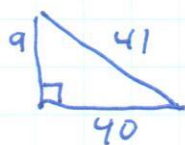
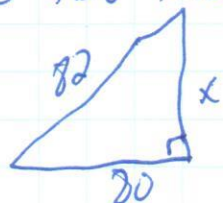
- A 36.4 ft
B 98 ft
C 70 ft
D 473.2 ft

(24) solve. This problem is a proportion equation. Show your work accordingly.
Joan can mow a 10-acre field in 5 hr. How long would it take her to mow a 4-acre field?

(25) Find the rate, or speed as a ratio of distance to time. Round to the nearest hundredth when necessary. 99.4 ft, 7.1 sec
A 6.9 ft/sec C 1.4 ft/sec
B 14 ft/sec D 21.1 ft/sec

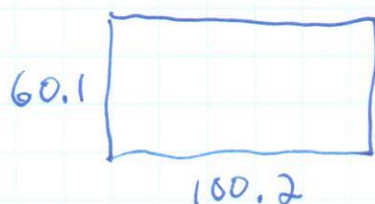
(26) Determine which size is the best buy. 11.75 oz for \$4.35
14.25 oz for \$5.42
A 11.75 oz C equal
B 14.25 oz D not enough info

(27) The two triangles are similar. Find the missing length or lengths



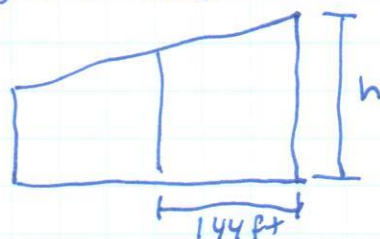
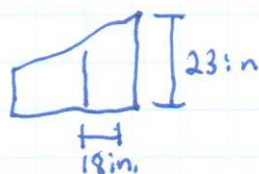
A. 9 C. 13
B. 27 D. 18

(28) Find fraction notation for the ratio. You need NOT simplify
what is the ratio of length to width? Of width to length



A. $\frac{100.2}{60.1}$; $\frac{60.1}{100.2}$ C. $\frac{100.2}{60.1}$; $\frac{60.1}{100.2}$
B. $\frac{60.1}{100.2}$; $\frac{100.2}{60.1}$ D. $\frac{60.1}{100.2}$; $\frac{100.2}{60.1}$

(29) The sides in the pair of figures are proportional
Find the missing length or lengths



A. 207 ft C. 161 ft
B. 184 ft D. 167 ft

(30) Find the ratio of the first number to the second and simplify.
15 to 21?
A $\frac{15}{21}$ C. $\frac{5}{21}$
B $\frac{15}{7}$ D. $\frac{5}{7}$

31) Max started playing QB for his team last season. Last season, he completed 280 passes of 438 attempted. This season, he completed 310 passes of 484 attempted. Find each pass completion rate round to the nearest hundredth. Are the rates the same?

☐ 0.64, 0.64 yes

☐ 0.64, 0.65 no

32) To determine the number of fish in a lake, a park ranger catches 220 fish, tags them, and returns them to lake. Later 72 fish are caught and it is found that 45 of them are tagged. Est number of fish in the lake.

A 352

C 138

B 15

D 712,800

33) Solve. If Allison's company charged \$155.64 for 6 hours of work, what rate did the company charge in dollars per hour?
Show work accordingly.