

Name: _____

October 22, 2003

PART TWO (2 points each)

1. What decimal is closet to $\frac{4}{7}$?
a) 0.5 b) 0.57 c) 0.74 d) 1.75
2. Write 63,000 in scientific notation.

3. Write 0.00044 in scientific notation.

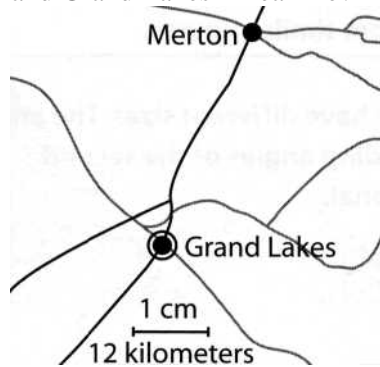
4. Evaluate: $7.14 \times 10^3 =$

5. Find the answer to 300×200 in scientific notation.

6. Evaluate: $3.95 \times 10^{-4} =$

7. A millisecond lasts for 10^{-3} seconds. How long do 5 milliseconds last?

8. Use your centimeter ruler and this map to help you answer this question. How far apart are Merton and Grand Lakes in real life?



- a) 4 km b) 18 km c) 24 km d) 36 km

9. An online map service gives Mr. Gait this information.

Distance on map between cities: 7.5 inches
Scale 1 in. = 50 miles

How far apart are the cities in real life?

- a) 175 miles b) 275 miles
c) 375 miles d) 400 miles

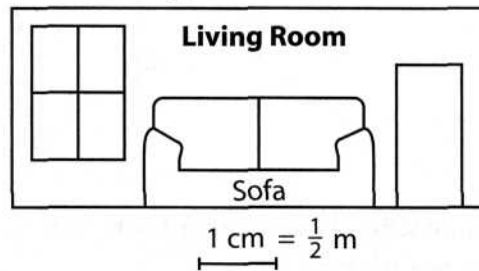
10. The actual distance between two cities is 450 kilometers. A map will use a scale of $1 \text{ cm} = 100 \text{ km}$. How far apart will the cities be on the map?

- a) 2.5 cm b) 4.5 cm c) 10cm d) 45 cm

11. A scale drawing is made for the swimming pool at the local gym. Its dimensions on the drawing are 40 cm by 20 cm. The scale is $1 \text{ cm} = 2 \text{ m}$. What are the actual dimensions of the pool?

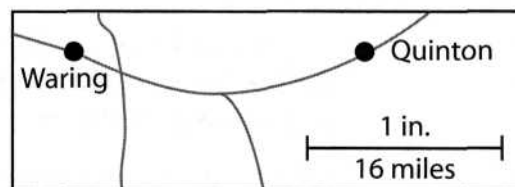
- a) 60m x 30m b) 20m x 10m
c) 80m x 50m d) 80m x 40m

12. Use a centimeter ruler to find the actual length of the sofa.



- F** $1\frac{1}{2} \text{ m}$ **H** $4\frac{1}{2} \text{ m}$
G 3 m **J** 6 m

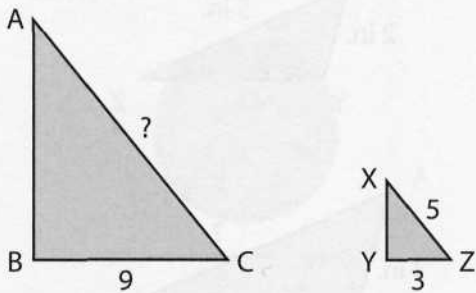
13. Use an inch ruler to find the actual distance from Waring to Quinton.



- A** 32 miles **C** 16 miles
B 24 miles **D** 10 miles

14.

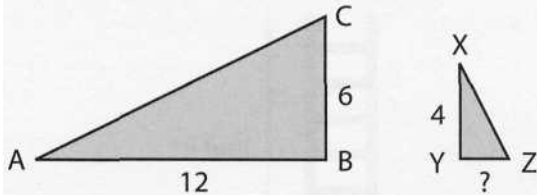
Triangle ABC is similar to triangle XYZ. What is the length of \overline{AC} ?



- A** 3 **C** 15
B 9 **D** 27

15.

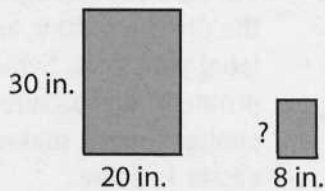
Triangle ABC is similar to triangle XYZ. What is the length of \overline{YZ} ?



- F** 8 **H** 4
G 6 **J** 2

16.

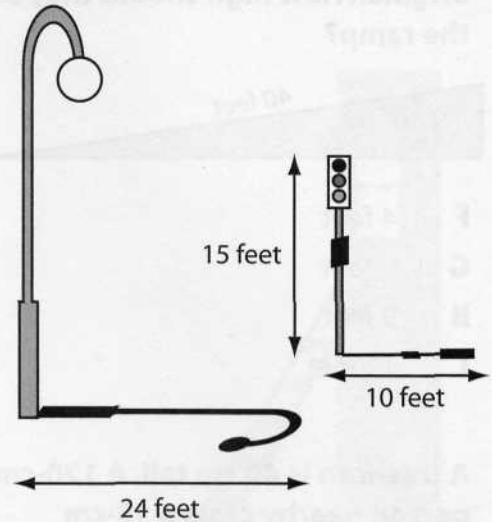
A 20-inch by 30-inch photo was reduced proportionally in size. What is the length of the unmeasured side?



- A** 10 in. **C** 16 in.
B 12 in. **D** 18 in.

17.

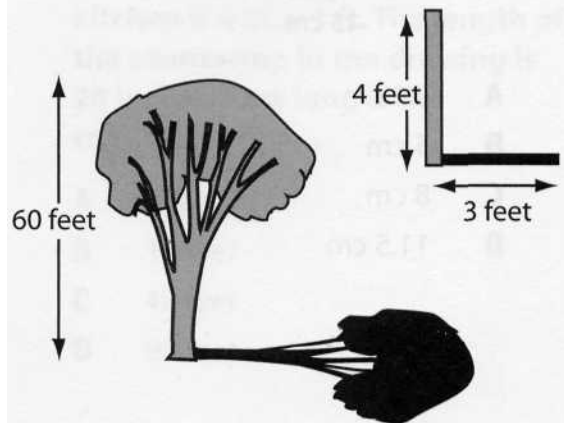
A lamppost casts a 24-foot shadow. At the same time, a 15-foot traffic light casts a 10-foot shadow. How tall is the lamppost?



- F** 18 feet **H** 36 feet
G 25 feet **J** 42 feet

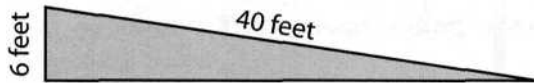
18.

At 3 P.M., a 4-foot high pole casts a 3-foot shadow. What would be the length of a shadow cast by a tree that is 60 feet tall?



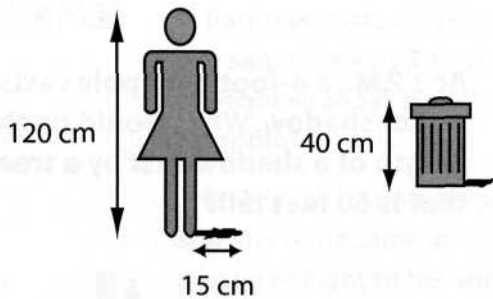
- A** 45 feet **C** 75 feet
B 60 feet **D** 90 feet

19. **A skating ramp has a maximum height of 6 feet and runs a length of 40 feet. The skate park wants to make a new, 60-foot ramp that has the same slope (makes the same angle with the ground) as the original. How high should they set the ramp?**



- F** 4 feet
- G** 6 feet
- H** 9 feet
- J** 12 feet

20. **A trashcan is 40 cm tall. A 120-cm person nearby casts a 15-cm shadow. How long is the trashcan's shadow?**



- A** 3.2 cm
- B** 5 cm
- C** 8 cm
- D** 11.5 cm

21. **4 black, 6 white** What is the ratio of black to white chips?

22. Jonah has 8 red and 6 blue jellybeans in his hand. What is the ratio of red jellybeans to the total?

23. Solve for x : $\frac{5}{6} = \frac{x}{21}$

- A** 15
- B** 17.5
- C** 18
- D** 19.2

24. **A costume rental costs \$130 for 4 days. How much will it cost for Fernando to rent the costume for 6 days?**

- F** \$160
- G** \$175
- H** \$180
- J** \$195

25. **Eddie puts 3 tablespoons of honey in every 4 cups of bread dough. How many tablespoons of honey does he need for 10 cups of dough?**

- A** 7 tablespoons
- B** $7\frac{1}{2}$ tablespoons
- C** $8\frac{1}{2}$ tablespoons
- D** $13\frac{1}{3}$ tablespoons

26. **Kiki's car went 192 miles on 8 gallons of gas. How many gallons will the car need to go 480 miles?**

- F** 14
- G** 16
- H** 18
- J** 20

<p>27.</p> <p>28.</p> <p>29.</p> <p>30.</p>	<p>A 12-minute call from Miami to Seattle cost Tamika \$0.84. What is the per minute rate?</p> <p>A \$0.01 C \$8.40 B \$0.07 D \$10.08</p> <p>A delivery truck traveled 440 miles in 8 hours. What was the average speed?</p> <p>F 44 mph G 50 mph H 55 mph J 60 mph</p> <p>Of 5200 radio listeners surveyed, 1 out of 4 said they listened for more than 5 hours a day. How many viewers listened for that long?</p> <p>A 1040 B 1300 C 2600 D 20,800</p> <p>A box of 12 Ink-Write pens sells for \$6.00. A box of 10 Glide-On pens sells for \$5.50. How do the prices compare?</p> <p>F An Ink-Write pen costs 5 cents more. G A Glide-On pen costs 5 cents more. H The prices are the same. J An Ink-Write pen costs 50 cents more.</p>	<p>PART TWO (8 points each)</p> <p>1. It takes Dr. Torrado 6 hours to see 15 patients. At this rate, how long would it take him to see 20 patients? Set up a proportion and solve. <i>Show your work.</i></p> <p>2. A 45-foot tree casts a 20-foot shadow. A person casts a 3-foot shadow. How tall is this person in feet? <i>Show your work.</i></p> <p>3. Marina is drawing a scale drawing of the Sears Tower. The actual height of the Sears Tower is 1450 feet. Marina chooses the following scale: 1 inch represents 50 feet. Is this a reasonable scale? Why or why not? <i>Show your work. Give reasons for your answer.</i></p> <p>4. A supermarket sells different size bags of apples at the same rate. If a bag containing 8 apples costs \$1.84, how much would you expect to pay for a bag containing 20 apples?</p> <p>5. A sweater has a price tag of \$36.50. Calculate the final price after 30% off and 8.75% tax.</p>
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