Sample Placement Test

Calculator permitted on questions 5, 6

1) A car is traveling 60 miles per hour. (1 mile = 1.6 kilometers).

  a. What is this speed in kilometers per hour?

  b. How many kilometers will this car travel in 4 hours?

2) Solve for u:

$$4(3u + 2) = 60 - u$$

3) James is planning a road trip. On one portion of the trip he calculates that at a speed of 100 km/h he would reach the end in 3 hours. If instead he decides to take the route with a speed of 60 km/h, how long would the trip now take over this portion?

**4)** Evaluate when: c = 3, b = -6 (Answer as a fraction or mixed number in lowest terms).

$$\frac{4c + b^2}{c}$$

5) A company stationed in Canada has only 12% of its employees within Canada. If there are 15000 employees in Canada, how many employees are there in total? (Round your answer to the nearest whole number.)

6) What percent of 345 is 35? (Round your answer to the nearest hundredth.)

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Sample Placement Test

Calculator permitted on question 8

7) How much of the circle is shaded?

$\frac{2}{5}$

$\frac{1}{3}$
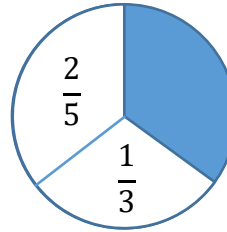
8) A bicycle has a sale price of $328, if this is after a 25% discount, what was the original price? (Round your answer to the nearest cent.)

9) The distance from the earth to the moon is approximately 384,000 km. What is this distance in meters?

Calculator permitted on questions: 12, 14.

10) If a team of 8 electricians is known to take 6 days to finish a job, how long should a team of 12 electricians take?

11) Evaluate (Answer as a mixed number or fraction in lowest terms.):

$$\left(4\frac{1}{6} - 1\frac{7}{8}\right) \times \frac{8}{11}$$

12) If a flour mill is producing 45 pounds of flour per minute, how long does it take this mill to produce 3000 pounds of flour? (Round your answer to the nearest thousandth.)

13) Find the area:

3 ft

4 ft

3.5 ft

4 ft

6 ft

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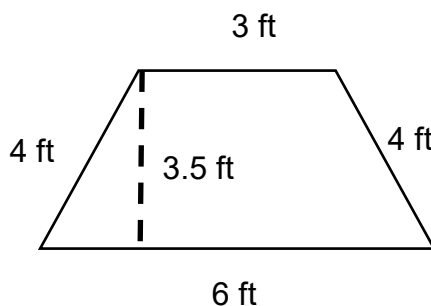
Sample Placement Test

14) a. 75 is 15% more than what number? (Round your answer to the nearest hundredth.)
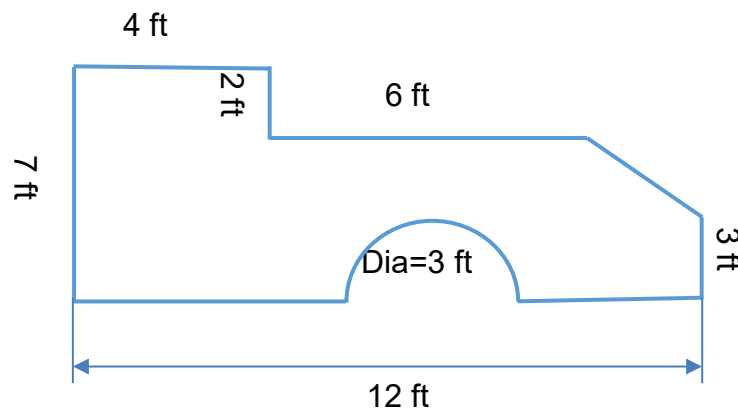
b. 86 is 20% less than what number?

15) Evaluate when: $s = -3, q = -2, r = 14$

$$7s + q^2 + r$$

16) Write 0.125 as a fraction in lowest terms.

17) Write $4\frac{7}{25}$ as a decimal.

18) Find the area:

19) Evaluate (Answer as a fraction or mixed number in lowest terms.):

$$\left(\frac{3}{4}\right)^2 \div \frac{1}{2}$$

20) A road crew working on a highway built $1\frac{1}{5}$ kilometers of road per day for 14 days. What is the total length of road built? (Answer as a fraction or mixed number in lowest terms)

Sample Placement Test

Calculator permitted on questions 21, 24, 26

21) 30.8 L of water have flowed out of a faucet. If the faucet pours 1.2 Liters per minute, how long was the faucet on? (Round your answer to the nearest tenth.)

22) Write $\frac{8}{11}$ as a decimal. (Use the repeating bar to show which set of digits repeats)

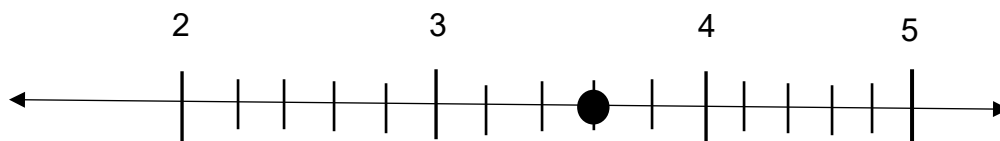**23) a.** Multiply: $-9.323 \times (-1000)$

   b. Divide: $4.32 \div (-0.01)$

24) A television has a listed price of $550. If tax is at a rate of 7.2%:
   a. What is the tax on the television?

   b. What is the total price of the television including tax?

25) What is the position of the dot on the number line below? (Answer as a fraction or mixed number in lowest terms.)

26) A company that produces cars says that the new model of one of their cars will be 12.8% less than the original price of the previous model. If the previous model cost $34,500 what will be the price of the new model?

27) Evaluate (Answer as a fraction or mixed number in simplest form):
$$\frac{5}{6} - \frac{2}{3} \times \frac{3}{8}$$

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Sample Placement Test

28) Evaluate when $y = -3$

$$y^2 + 8y - 3$$

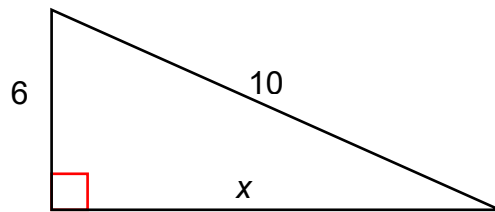*Calculator permitted on question 29*

29) A man walking is moving with a speed of 3.8 miles per hour. (1 mile = 1.6 kilometers).
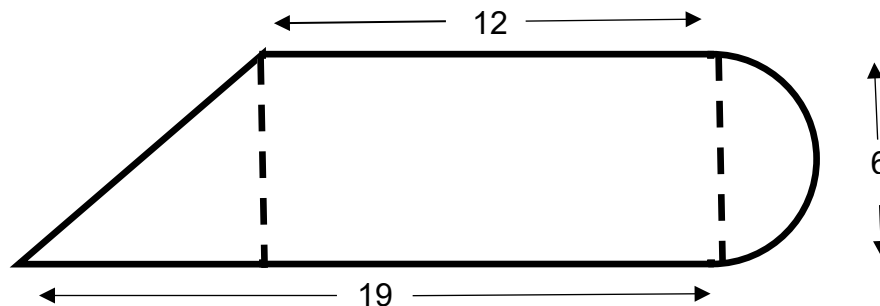
    a. What is this speed in kilometers per hour?

    b. How many kilometers did he travel in 7 hours?

    c. What is the distance traveled in part b in meters?

30) What is the length of side x?

31) Find the area (round your answer to the nearest hundredth):

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Answer Key:

1) a) 96 km/h   b) 384 km

2) u=4

3) 5 hours

4) 16

5) 125000 employees

6) 10.14%

7) $\frac{4}{15}$

8) $437.33

9) 384,000,000 m

10) 4 days

11) $1\frac{2}{3}\ or\ \frac{5}{3}$

12) 66.667 minutes

13) 15.75 ft^2

14) a) 65.22   **b)** 107.5

15) -3

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

17) 4.28

18) 62.47ft^2

19) $1\frac{1}{8}\ or\ \frac{9}{8}$

20) $16\frac{4}{5}\ km\ or\ \frac{84}{5}\ km$

21) 25.7 minutes

22) $0.\overline{72}$

23) a) 9323,   **b)** 432

24) a) $39.60   **b)** $589.60

25) $3\frac{3}{5}\ or\ \frac{18}{5}$

26) $30084

27) $\frac{7}{12}$

28) -18

29) a) 6.08 km/h **b)** 42.56 km
c) 42560 m

30) X=8

31) 107.14 m^2

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