

Name: _____
Mathematics Period 3

Date: 3/25/15
Ms. Wilson

**Multiplying Decimals
Classwork**

1.) A bolt has a diameter of 1.375 inches. The threaded length of the bolt is 2 times the diameter, plus 0.250 inch. What is the threaded length of the bolt in inches?

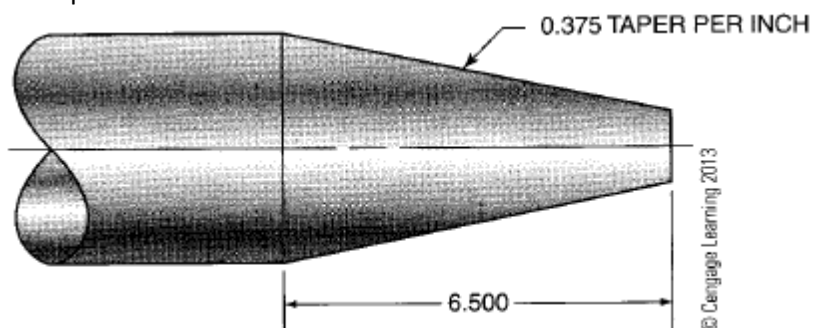
2.) A designer knows that for each complete turn of a wheel, the wheel rolls a distance approximately equal to 3.14 times its diameter. How far in inches does a 12.6 inch-diameter wheel roll after three complete turns?

3.) A CAD drafter's salary is increased by \$63.28 per month. What is the drafter's total raise for the year?

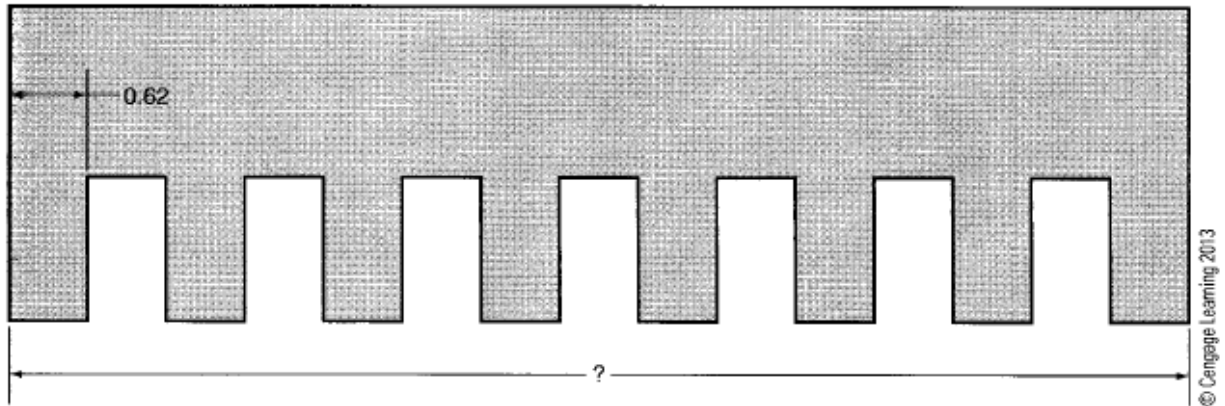
4.) A CAD drafter drives 45.5 miles to work each day. What is his total round-trip mileage if the drafter works 165.5 days a year, and the distances remain the same?

5.) A USB flash drive costs \$9.99. Calculate the cost of three drives. What would be the cost of a gross of drives? (1 gross = 12 dozen)

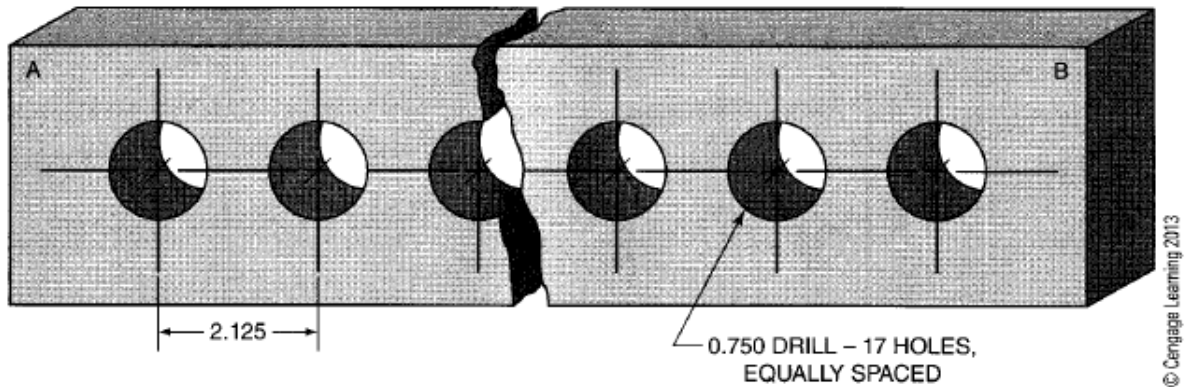
6.) A shaft is tapered 0.375" per inch of its length. By how many inches is the CAD drawing of the shaft below tapered?



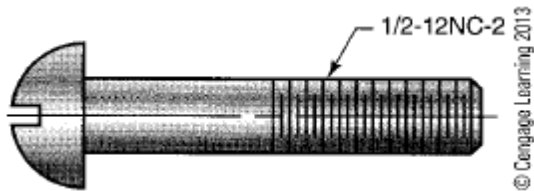
7.) All sections on this CAD drawing of a gage have equal widths. What is the overall length of the gage?



8.) There are 17 equally spaced holes on this CAD drawing of a plate. Calculate the distance between the centers of holes A and B.



9.) This round-head cap screw has a thread pitch of $1/12$; that is, 12 threads per inch. How many threads are contained in a rod that is 11.625 inches long and has the same thread pitch as the CAD drawing of this cap screw?

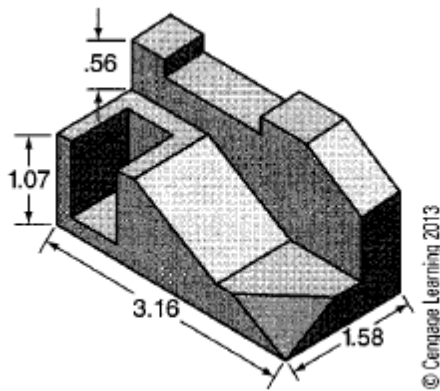


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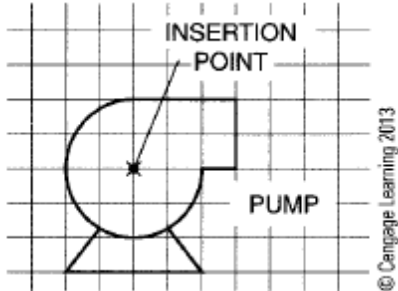
Date: 3/25/15
Ms. Wilson

Multiplying Decimals
Homework – Due 3/26/15

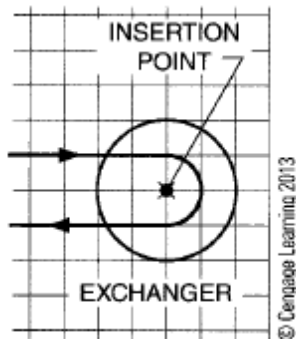
1.) Determine the height, width, and depth after this isometric CAD drawing of an object is scaled up by a factor of 4.



2.) This pump symbol is to be inserted into a CAD drawing at 6 times its present size. Calculate the new height and width of the pump if the grid size is 0.125.



3.) The symbol for an exchanger used in piping is shown on a 0.25 grid. The symbol is inserted using a 1.75 scaling factor. Calculate the enlarged sizes for its height and width.



Orthographic projection of a mechanical part. The front view (top) shows a vertical oval with a central hole of diameter $\varnothing 1.50$. The top view (bottom) shows a horizontal oval with a central hole of diameter $\varnothing 0.75$. Dimensions include radii $R0.385$, $R1.125$, and $R0.56$, and vertical dimensions 1.50 and 3.00 .

Technical drawing of a shim. The drawing shows a symmetrical, elongated shape with rounded ends and a central rectangular section. Key dimensions and labels include:

- Height**: Indicated by a dimension line on the right side.
- 2.257 R TYP**: Label for the top and bottom outer radii.
- 450 R**: Label for the top and bottom inner radii.
- .375**: Dimension for the vertical distance from the centerline to the top and bottom inner radii.
- .375 R (2)**: Label for the top and bottom inner radii.
- .750 DIA (3)**: Label for the three circular holes.
- A**: Dimension for the horizontal distance from the centerline to the leftmost hole.
- .875**: Dimension for the horizontal distance from the centerline to the first hole.
- 2.625**: Dimension for the horizontal distance between the first and second holes.
- .750**: Dimension for the horizontal distance from the second hole to the right edge.
- .438**: Dimension for the horizontal distance from the right edge to the centerline.
- 5.251**: Total horizontal dimension from the left edge to the right edge.
- SHIM**: Label at the bottom center.