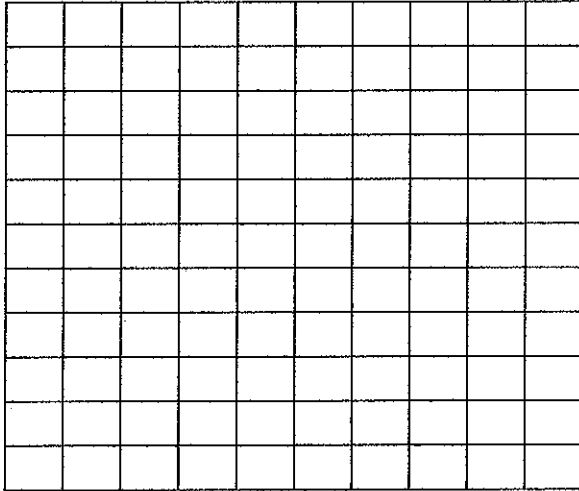MATH 230 Review Exercises

1. Show how to use two methods – a picture and a proportion – to answer the following question.

24 is 6% of what number?

2. Show how to use two methods – a picture and a proportion – to answer the following question.

The ratio of boys to girls in a class is 5 to 4. If there are 27 students in the class, how many are girls?

3. Place each of the following numbers in scientific notation.

a. 367,000,000

b. 0.0000075

4. $10,000 is invested in an account that pays interest at the rate of 5% compounded at the end of each year. If no further deposits or withdrawls are made, what will be the value of the account after 3 years?

5. Classify each number as rational or irrational.
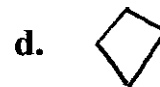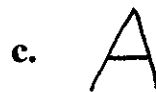
    a.    11/7        b.    2.5        c.    $\sqrt{8}$        d.    $\sqrt{121}$

6. The two longest sides of a right triangle have lengths 30 meters and 24 meters respectively. What is the length of the shortest side?

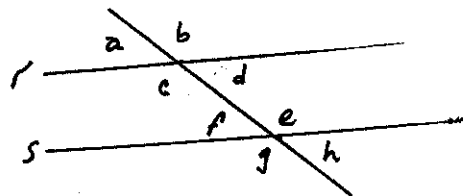7. Classify each curve as simple, simple closed, closed, or none of these.



    a.            b.          c.          d.

8. If $r$ and $s$ are parallel lines and the measure of $\angle a$ is $35°$, find the measures of each of the following angles.

    a.    $\angle e$        b.    $\angle h$        c.    $\angle c$        d.    $\angle f$



9. Identify each statement as true or false. If false, provide a counterexample. Or otherwise justify your answer.

a. If the midpoints of the adjacent sides of any quadrilateral are connected, a parallelogram is formed.

b. If the midpoints of the sides of any rectangle are connected, then another rectangle is formed.

c. The two diagonals of any parallelogram must have the same length

d. A regular pentagon will tessellate the plane.

e. Some right triangles are equilateral.