

Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Class: \_\_\_\_\_

Geometry  
 Review  
 Graded Homework 27

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.  
 NO WORK = ZERO CREDIT

1) [3] If line  $m$  travels through points  $(-3, 4)$  and  $(-7, 10)$  find the equation of line  $k$  if it is perpendicular to line  $m$  and also passes through the point  $(4, 4)$ .

2) [3] List 3 different specific transformations that will give you an image that is congruent to its pre-image (you must use 3 different types).

3) [3] Which of the following would prove that a parallelogram is a rhombus (explain why the wrong answers are wrong)?

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 1 – Diagonals are congruent     | 2 – Diagonals bisect each other |
| 3 – Diagonals are perpendicular | 4 – Diagonals are parallel      |

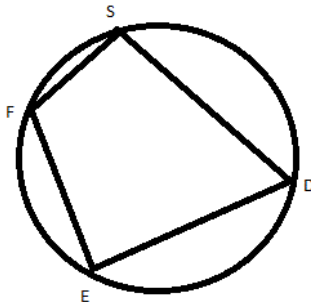
4) [3] Which of the following compositions of transformations would result a direct isometry (why is each wrong answer wrong)?

- |                                              |                               |
|----------------------------------------------|-------------------------------|
| 1 – $R_{90^\circ} \circ r_{y=x}$             | 2 – $R_{270^\circ} \circ D_2$ |
| 3 – $D_{\frac{2}{4}} \circ D_{\frac{10}{5}}$ | 4 – $r_{x=2} \circ D_1$       |

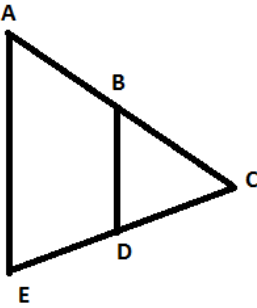
5) [3] Which of the following is equivalent in triangle CDE if D is the right angle?

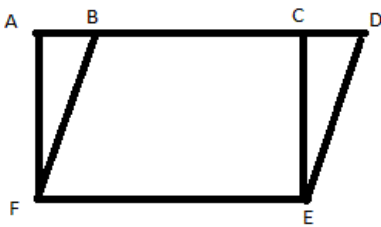
- |                         |                         |
|-------------------------|-------------------------|
| 1 – $\tan(C) = \tan(E)$ | 2 – $\sin(C) = \tan(E)$ |
| 3 – $\cos(C) = \tan(E)$ | 4 – $\sin(C) = \cos(E)$ |

6) [4]



If  $m\widehat{FSD} = 5x + 50$ ,  $m\widehat{SFE} = 6x + 8$   
 and  $m\widehat{FED} = 10x - 10$ , find  $m\angle EDS$

7) [3]   $\overline{BD} \parallel \overline{AE}$ ,  $BC = 10$ ,  $AB = 5$ ,  $BD = 12$ , find  $AE$

8) [6] 

Given:  $BDEF$  is a parallelogram  
 $\overline{FA} \perp \overline{AD}$   
 $\overline{CE} \perp \overline{AD}$   
 Prove:  $ACEF$  is a parallelogram

9) [4] Construct an inscribed hexagon using the following circle.

