Review Sheet for the Midterm _ Short Response Practice   1

Partitioning:

1. Points A, P and B are collinear on $\overline{AB}$, and AP:AB = 2/7. A is located at the origin, B is located at (7,-14) and P is located at (x,y). *(2, -4)*

2. Point D is collinear with points A and K on $\overline{AK}$. A is at (7, 2) and K is at (2, -10). Point D partitions AK in a ratio of 5:1. Point D can assume 2 different locations. Find each location of D. $\left(\frac{17}{6}, -8\right)$ & $\left(\frac{37}{6}, 0\right)$

3. Consider the following diagram. Which of the following statements are true? Select all that apply?
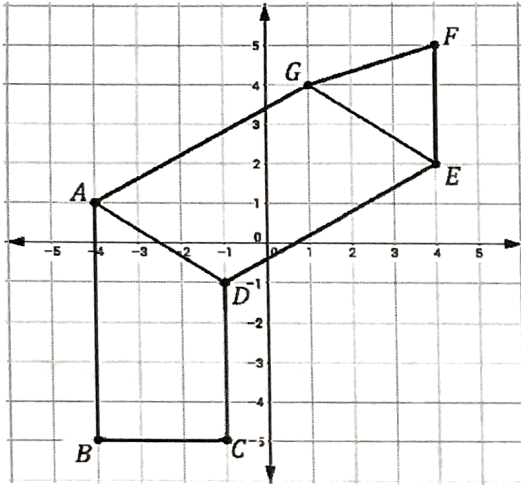
a) ✓ The midpoint of AG is (-1.5, 2.5)
b) ___ DE is exactly 5 units
c) ___ AD is exactly 3 units
d) ✓ FG is longer than EF
e) ✓ The perimeter of quadrilateral ABCD is about 16.6 units
f) ✓ The perimeter of quadrilateral ADEG is about 18.8 units
g) ___ The perimeter of triangle EFG is 9 units

USE THE DIAGRAM TO THE LEFT FOR QUESTIONS 3 – 7

Distance and Perimeter:

3. Consider the triangle ABC below. Find the <u>perimeter</u> of triangle ABC.   *13.1*

Hint: find the length of AB, BC, and AC separately then add them all together to find the perimeter.

Transformations:

4. Translate the figure according the rule $(x,y) \rightarrow (x - 3, y + 2)$ and write the coordinates.
$A'(-4, 0) \quad B'(1, 3) \quad C'(-2, -1)$

5. Reflect the figure across the line y = x.
$A'(-2, -1) \quad B'(1, 4) \quad C'(-3, 1)$

6. Reflect the figure across the x-axis.
$A'(-1, 2) \quad B'(4, -1) \quad C'(1, 3)$

7. Rotate the figure 180° counterclockwise.
$A'(1, 2) \quad B'(-4, -1) \quad C'(-1, 3)$

Similar Polygons:

The polygons in 8 (A and B) are similar. Solve for x.

8A) $x = 2$

5x+2

3

48

12

8B) $x = 4$

Ratio of Left to Right Polygon is 3:4

5x+1

28

9. Parallel and Perpendicular Lines

Match the equation on the left to the line description on the right.

A.) $y = 13$

B.) $y = -\frac{2}{3}x - \frac{2}{3}$

C.) $4x - 7y = 56$

D.) $2x - 4y = -10$

B	**1.** A line perpendicular to $-3x + 2y = 8$
D	**2.** A line parallel to $2y - x = 2$
A	**3.** A line perpendicular to $x = -13$
C	**4.** A line parallel to $16x = 28y$

Special Angle Pairs

10)

Solve for x, y, and z

$(12x)$

$(8y - 16)$ ∠4   ∠5

ℓ_1

$(3x + 9)$ ∠3   ∠2   ∠1

$(2z + 6)$ $4(3y - 12)$

ℓ_2

11 ↙   ↓   ↓
8   42

11) Hint: Look for the Z's …

f 110
d   e 70
45   c
65
b 45   70 a
135°   70°

Angles of a Polygon:

a) Find the value of x.

12)

$x = 8$

138° 18x°
115°
167°
151°
133°
14x°   120°

b) Find the value of x.

$x = 16$

46°
3x°
93°
62°
47°
4x°
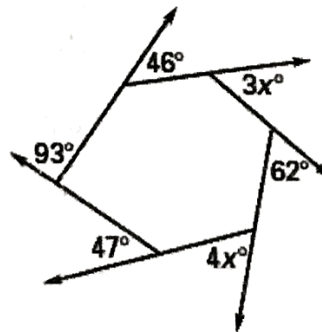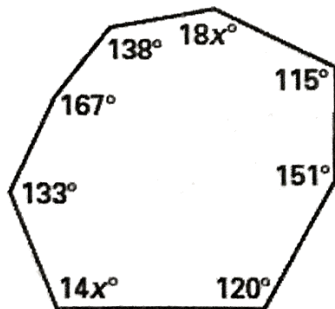
Unit 1 Formulas/Rules:
Midpoint, Distance, Partitioning, Equations of a Line, Parallel and Perpendicular Slopes
Unit 2 Formulas/Rules:
Translation Rules, Reflection Rules, Rotations Rules, Dilations Rules, Finding Scale Factor
Unit 3 Formulas/Rules:
Complementary, Supplementary, Vertical Angles, Parallel Lines cut by a Transversal Special Angle Pairs
Unit 4 Formulas/Rules:
Interior and Exterior Angles of a Polygon, Rotational Symmetry, Similarity Proportions, Scale Factor