Key – Geometry Worksheet 1.1

Problem 1

a) Line 1 (Pick one) – Line q, \( \overrightarrow{ED}, \overrightarrow{EF}, \overrightarrow{DF} \)
   Line 2 (Pick one) – Line p, \( \overrightarrow{CF}, \overrightarrow{CD}, \overrightarrow{DF} \)

b) Pick 4 – B, C, D, E, F

c) Point A and (pick 3 from B, C, D, E, F)

d) (Pick 4) – Plane BEF, Plane BFD, Plane BEC, Plane BFD, Plane EDC, Plane CDF, Plane EDB, Plane EFC

Problem 2

a) 6

b) Plane 1 – Plane ______ (Pick 3 points from A, B, C, G, J, K but NOT ABK or BJC)
   Plane 2 – Plane ______ (Pick 3 points from A, G, E, F)
   Plane 3 – Plane ______ (Pick 3 points from C, D, E, G)
   Plane 4 – Plane ______ (Pick 3 points from D, E, F, H)
   Plane 5 – Plane ______ (Pick 3 points from A, B, H, F)
   Plane 6 – Plane ______ (Pick 3 points from B, C, D, H, J but NOT BCJ)

c) B, C, and J or A, B, and K

d) Pick any 3 points but NOT B, C, J or A, B, K

Problem 3

a) \( \overrightarrow{PS}, \overrightarrow{PR}, \overrightarrow{RS} \), line n

b) \( \overrightarrow{TU}, \overrightarrow{UT} \), line l

c) Plane ______ (Pick 3 from P, Q, R, S, T, U, W but NOT PRS) Must have 4 different answers

Problem 4

a) 5

b) Yes

c) E, F, and C

d) Pick any 3 points but not E, F, C
Problem 5

a) Line \( \overline{PQ}, \overline{PR}, \overline{QR} \)

b) Plane \( T \) (pick 2 from PQR)

c) Pick 3 letters but NOT PQR

Problem 6

a) Yes

b) Plane P (or Plane ABC)
   Plane O (or Plane ABC)
   Plane N

c) A line

d) \( \overline{AB} \)

e) A, B, C, D
Problem 7

a) No
b) $\overline{BC}, \overline{CD}$, and $\overline{AB/AE/BE}$
c) A, B, E
d) A point

Problem 8

a) 6
b) Plane 1 – Plane _____ (Pick 3 points from A, B, G, H)
Plane 2 – Plane _____ (Pick 3 points from C, D, E, F)
Plane 3 – Plane _____ (Pick 3 points from A, D, G, F)
Plane 4 – Plane _____ (Pick 3 points from B, C, E, H, I but NOT EHI)
Plane 5 – Plane _____ (Pick 3 points from A, B, C, D)
Plane 6 – Plane _____ (Pick 3 points from E, F, G, H, I, J but NOT EFJ or HIE)
c) E, F, G, H, I, J
d) Pick 4 points that are not all in the same plane

Problem 9

a) 5
b) Plane ABC or Plane W
Plane _____ (Pick 3 from A, B, E, F)
Plane _____ (Pick 3 from B, C, D, E)
Plane _____ (Pick 3 from C, D, E, F)
Plane DEF
c) No
d) None

Problem 10
Grading Scale

0 incorrect = 10
1-4 incorrect = 9
5-8 incorrect = 8
9-12 incorrect = 7
13-16 incorrect = 6
17-20 incorrect = 5