

Section 2.2 Answers to the assigned even problems

2. a) $\triangle GHI$, $\triangle MNO$

b) $\triangle ABC$, $\triangle DEF$, $\triangle JKL$, $\triangle PQR$

c) $\triangle JKL$, $\triangle MNO$

d) $\triangle ABC$, $\triangle PQR$

e) None, based on the given information

4. a) b) c) are pictures of triangles; d) Impossible – all angles must be less than 90 degrees for the triangle to be acute

6. a) Five triangles: 2-11-11, 4-10-10, 6-9-9, 8-8-8, 10-7-7

b) Seven triangles: 3-10-11, 4-9-11, 5-9-10, 5-8-11, 6-7-11, 6-8-10, 7-8-9

c) One triangle: 8-8-8

8. a) 28

b) 8

c) 5

d) 8

e) 15

10. Many curves are possible

12.

14. a) No – not all line segments

b) Yes

c) No – crosses itself

d) Yes

e) No – retraces itself

16.

18. a) BDFH

b) BCDG, AB DG, OR BDEG

c) $\triangle ABG$, $\triangle BDG$, $\triangle GDE$, $\triangle BCD$, or $\triangle ACE$

d) $\triangle ABG$, $\triangle BDG$, $\triangle GDE$, $\triangle BCD$, or $\triangle ACE$

e) $\triangle EFI$

f) $\triangle BHG$, $\triangle ABH$, $\triangle GDF$, $\triangle DEF$

g) AB DG, BDEG, or BCDG

h) ABDE, BCEG, ACDG

i) $\triangle DIE$

j) BDEH or BDFA

k) BCDGH, BCD FG, BCD FH, ABDIE, BDIEH, or BDJEH

20. a) 18

b) 3

c) 2

d) 29

22. a) 6

b) 16

c) 0

28. a) Yes, 2

b) Yes, 1

30. a) Yes, 1

b) No