

Handout 4: This Is An \overline{AB} Conversation, So We'll C You Later Answers

1. The obtuse isosceles triangle $\triangle ABC$ has coordinates $A(3,5)$ and $B(12,11)$, with $\angle ABC$ being the obtuse one. If the base of the triangle is a straight horizontal line, what are the coordinates of C ?
 $(21,5)$.
2. The acute isosceles triangle $\triangle DEF$ has coordinates $D(3,5)$ and $E(12,11)$, with \overline{DF} being the straight vertical side and the base of the triangle. What are the coordinates of F ?
 $(3,17)$.
3. A triangle's coordinates are at $(1,4)$, $(7,6)$, and $(2,11)$. What kind of triangle is it?
Acute isosceles.
4. A triangle's coordinates are at $(3,8)$, $(8,7)$, and $(6,-3)$. What kind of triangle is it?
Right scalene.

For questions 5-7, use this information: $\triangle GHI$ has coordinates $G(7,2)$, $H(4,9)$, and $I(9,8)$.

5. What is the length of \overline{GH} ?
 $\sqrt{58}$.
6. What is the length of \overline{GI} ?
 $2\sqrt{10}$.
7. What is the length of \overline{HI} ?
 $\sqrt{26}$.

For questions 8-10, use this information: $\triangle JKL$ has coordinates $J(10,6)$, $K(18,12)$, and $L(10,12)$.

8. What kind of triangle is $\triangle JKL$?
Right scalene.
9. M is the midpoint of \overline{KL} . What is the length of \overline{JM} ?
 $2\sqrt{13}$.
10. N is the midpoint of \overline{JK} . What is the length of \overline{KN} ?
5.