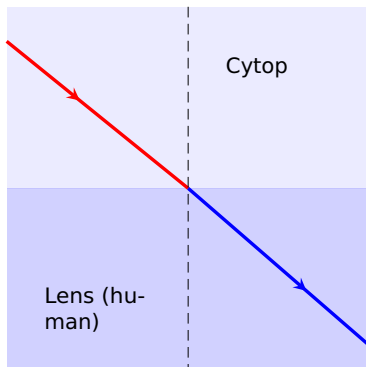
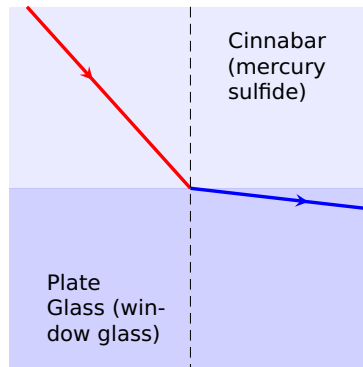


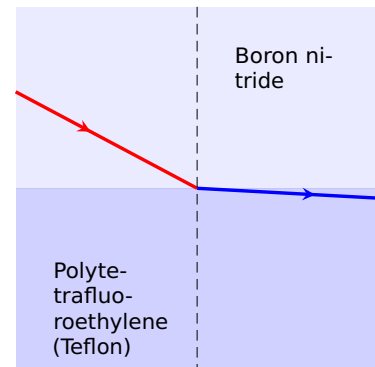
For each of the following ray diagrams measure the angles of incidence, i , and refraction, r .



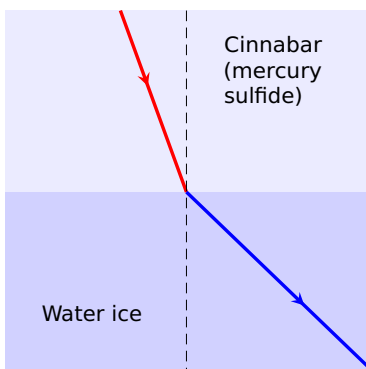
1) $i =$
 $r =$



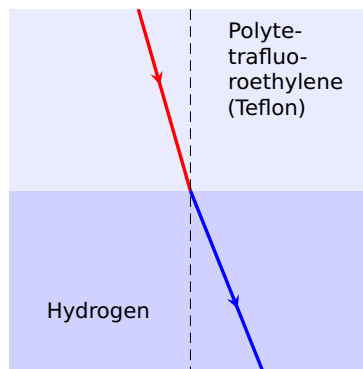
2) $i =$
 $r =$



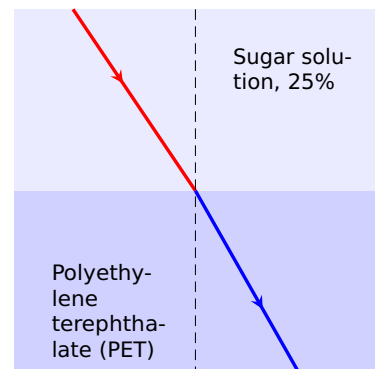
3) $i =$
 $r =$



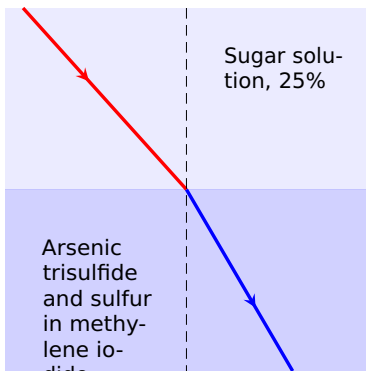
4) $i =$
 $r =$



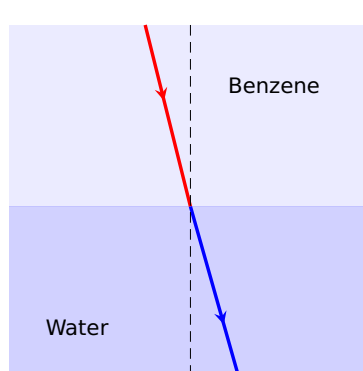
5) $i =$
 $r =$



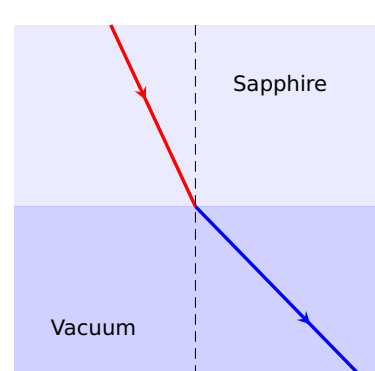
6) $i =$
 $r =$



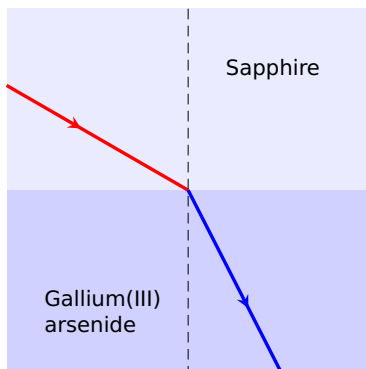
7) $i =$
 $r =$



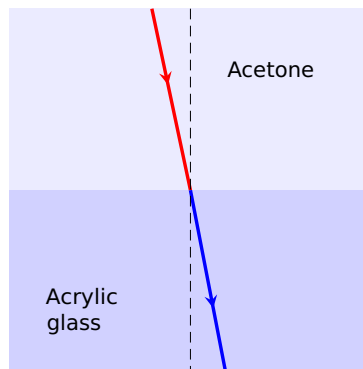
8) $i =$
 $r =$



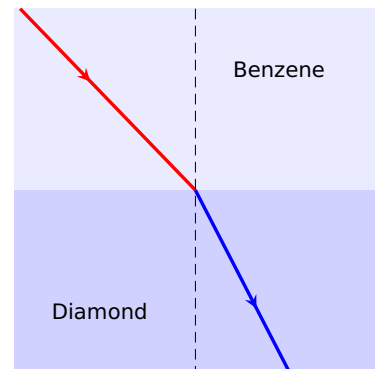
9) $i =$
 $r =$



10) $i =$
 $r =$



11) $i =$
 $r =$



12) $i =$
 $r =$

Answers

- 1) $i=51^\circ$, $r=49^\circ$
- 2) $i=42^\circ$, $r=83^\circ$
- 3) $i=62^\circ$, $r=87^\circ$
- 4) $i=20^\circ$, $r=46^\circ$
- 5) $i=16^\circ$, $r=22^\circ$
- 6) $i=34^\circ$, $r=30^\circ$
- 7) $i=42^\circ$, $r=30^\circ$
- 8) $i=14^\circ$, $r=16^\circ$
- 9) $i=25^\circ$, $r=44^\circ$
- 10) $i=60^\circ$, $r=27^\circ$
- 11) $i=12^\circ$, $r=11^\circ$
- 12) $i=44^\circ$, $r=27^\circ$