

# Practice Worksheet 1.5A – Angle Bisectors

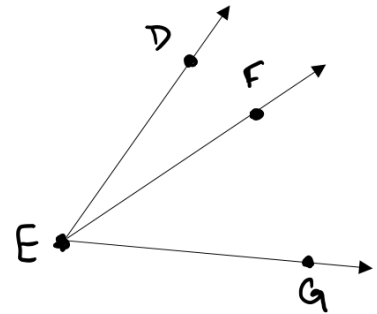
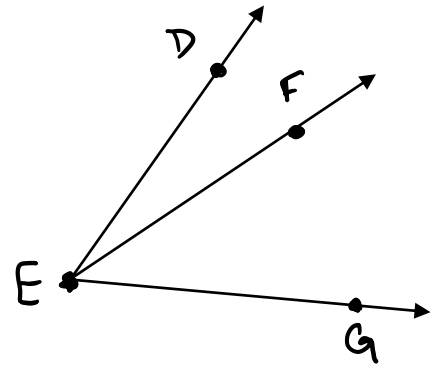
## Geometry Homework

For # 1-5,  $\overline{EF}$  bisects  $\angle DEG$ . (The diagram is not drawn to scale.)

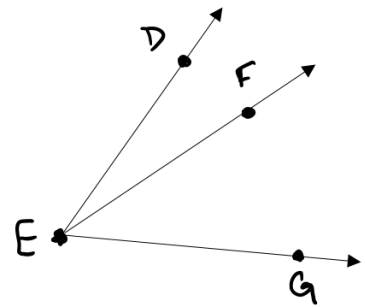
1. If  $m\angle DEG = 88^\circ$ , find  $m\angle FEG =$  \_\_\_\_\_

2. If  $m\angle FED = 27^\circ$ , find  $m\angle GED =$  \_\_\_\_\_

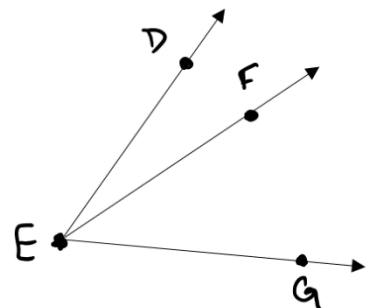
3. If  $m\angle DEF = 3x+1$  and  $m\angle DEG = 5x+19$ , find the value of  $x$ .



4. If  $m\angle DEF = 5x-3$  and  $m\angle FEG = 2x+15$ , find the value of  $x$ .

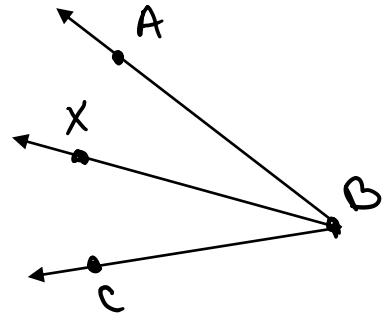


5. If  $m\angle FEG = 6x-7$  and  $m\angle FED = 2x+41$ , find the  $m\angle DEG$ . (solve for  $x$  first!)

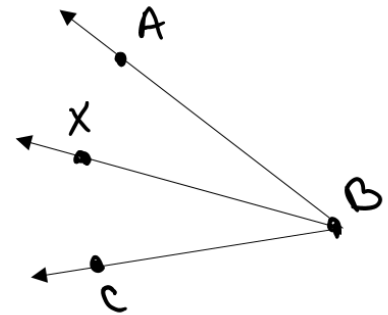


For #6-9,  $\overline{BX}$  is the BISECTOR of  $\angle ABC$ . (Diagrams are not drawn to scale)

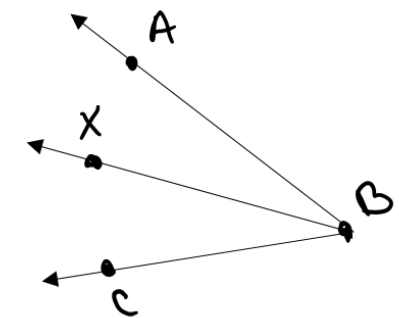
6. If  $m\angle ABX = 5x$  and  $m\angle XBC = 3x + 10$ , find the  $m\angle ABC$ . (Solve for  $x$  first!)



7. If  $m\angle ABC = 4x - 12$  and  $m\angle ABX = 24$ , find the value of  $x$ .



8. If  $m\angle ABC = 4x + 16$  and  $m\angle CBX = 3x + 6$ , find the value of  $x$ .



9. If  $m\angle ABC = 5x + 18$  and  $m\angle CBX = 2x + 12$ , find the value of  $x$ , and the  $m\angle ABC$ .

