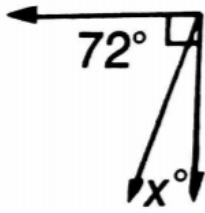


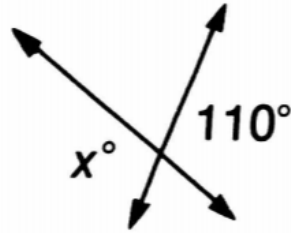
Warm-up:

Calculate the unknown angle measures.

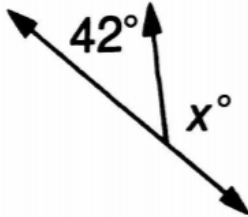
a.



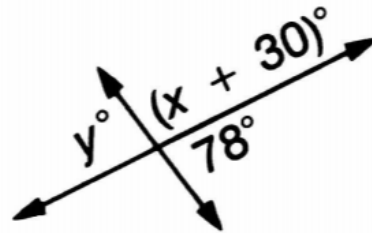
b.



c.



d.



Nov 6-8:31 AM

Angle Bisectors and Perpendicular Lines

7.2

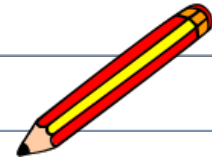


That's acute joke

Nov 21-2:19 PM

## page 225

## angle bisector:



- a segment, ray, or line that divides an angle into two equal halves.

## How can we bisect an angle?

- using a compass see instructions on Pg. 225

- using a protractor see instructions on Pg. 289

- folding

Challenge>>>>

How many times can you fold a piece of paper???

Feb 13-4:41 PM

## Pg. 226

**BUILD YOUR SKILLS**

1. If a right angle is bisected, what is the size of each angle?

$$\frac{1}{2} \text{ of } 90^\circ = 45^\circ$$

May 12-1:09 PM

add to page 225



A straight angle bisector creates two  $90^\circ$  angles. The bisector is **perpendicular** to the straight angle.

Feb 13-4:41 PM

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**BUILD YOUR SKILLS**

5. A crooked table leg makes an angle of  $86.7^\circ$  with the tabletop. How much must the carpenter move the leg so that it is perpendicular to the tabletop?

$$86.7^\circ + \underline{\quad} = 90^\circ$$

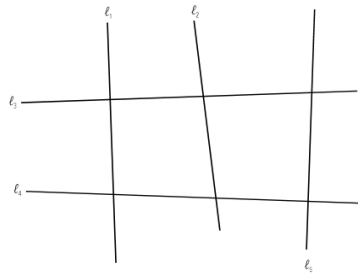
$\searrow$   
 $3^\circ$

Apr 4-9:44 AM

4. The size of one resulting angle after the original angle is bisected is equal to the supplement of the original angle. What is the measure of the original angle?

**Example 2**

Using a protractor, determine which of the following lines are perpendicular.



In the workplace, carpenters often use framing squares and levels to ensure that they have right angles. A framing square is a tool that is a right angle.

**SOLUTION**

The angles formed between  $l_1$  and  $l_3$  are each  $90^\circ$ , so  $l_1$  and  $l_3$  are perpendicular.

The angles formed between  $l_2$  and  $l_4$  are not  $90^\circ$ , so  $l_2$  and  $l_4$  are not perpendicular.

The angles formed between  $l_2$  and  $l_3$  are not  $90^\circ$ , so  $l_2$  and  $l_3$  are not perpendicular.

The angles formed between  $l_2$  and  $l_4$  are not  $90^\circ$ , so  $l_2$  and  $l_4$  are not perpendicular.

The angles formed between  $l_3$  and  $l_4$  are not  $90^\circ$ , so  $l_3$  and  $l_4$  are not perpendicular.

The angles formed between  $l_3$  and  $l_4$  are each  $90^\circ$ , so  $l_3$  and  $l_4$  are perpendicular.

## Homework

Pg. 226 Q. 2(use a referent), 3 & 4

Pg. 228 Q. 6 & 7