March 23, 2015

1st
2nd

Starter

Five actors, Billy Hunt, Ryan McCrazy, Jimmy Lymmon, Lauren Fender and Rosanna Folia, are shooting a scene in a new movie.

- Billy managed to do the scene correctly in 5 takes, then in every 7th take afterwards.
- Ryan managed to do the scene perfectly in the first take, but then he lost his touch and managed to do the scene correctly in every 9th take afterwards.
- Jimmy took 10 takes to do the scene correctly, but then he managed to do the scene correctly in every 4th take afterwards.
- Lauren wasn't very sure but she did the scene perfectly on the 4th take, however after that she took 6 takes to do the scene perfectly.
- Rosanna was perfect on the first and second takes, however after that she managed to do the scene correctly every 5th take.

How many takes did it take to shoot the scene?

3/23 Adjacent / Vertical Angles

Remember from last year:
What are the different types of angles?

Classification of Angles

Acute:	*Right:*	*Obtuse:*	*Straight:*
Less than 90°	Equal to 90°	Greater than 90° and less than 180°	Equal to 180°

Definition of ANGLE:

2 rays with a common endpoint

New word: ADJACENT

next to each other;
share one side

When two states are **adjacent**,

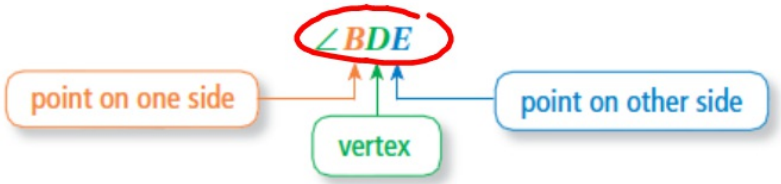
they are next to each other and they share a common border.

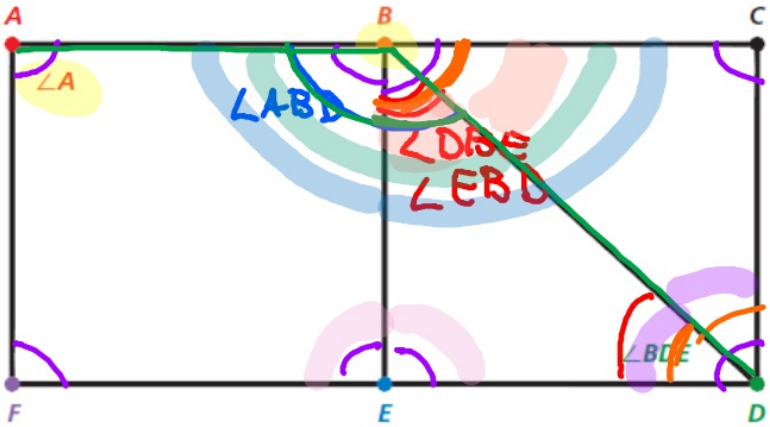
With your partner, come up with a list of things that could be considered 'adjacent.'

colors in a picture
shoes + socks
N + S Korea
Peanut Butter / Jelly on PBJ
March Madness Brackets
Feet + Slippers

Work with a partner. Some angles, such as $\angle A$, can be named by a single letter. When this does not clearly identify an angle, you should use three letters, as shown.

∠ means "angle"





ABEF and *BCDE* are squares.

a. Name all the right angles, acute angles, and obtuse angles.

b. Which pairs of angles do you think are *adjacent*? Explain.

a) rt ∠: ∠FAB ∠AFE ∠BCD ∠BED ∠EBA ∠EDC ∠BEF ∠EBC

Acute: ∠DBC ∠EBD ∠BDE ∠BDC

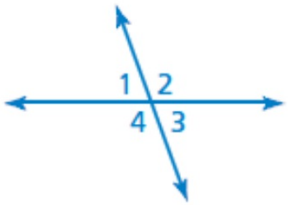
Obtuse: ∠ABD

b)

Adjacent Angles

Words Two angles are **adjacent angles** when they share a common side and have the same vertex.

Examples



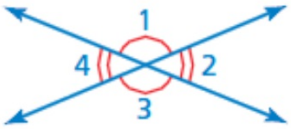
$\angle 1$ and $\angle 2$ are adjacent.

$\angle 2$ and $\angle 4$ are not adjacent.

Vertical Angles

Words Two angles are **vertical angles** when they are opposite angles formed by the intersection of two lines. Vertical angles are **congruent angles**, meaning they have the same measure.

Examples

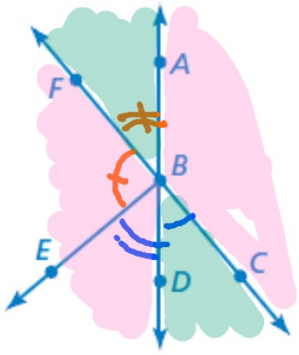


$\angle 1$ and $\angle 3$ are vertical angles.

$\angle 2$ and $\angle 4$ are vertical angles.

Use the figure shown.

a. Name a pair of adjacent angles.



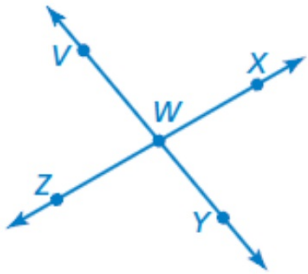
b. Name a pair of vertical angles.

∠FBD and ∠ABC

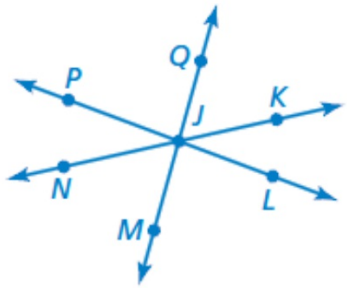
On Your Own

Name two pairs of adjacent angles and two pairs of vertical angles in the figure.

1.

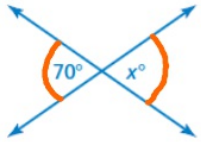


2.



Tell whether the angles are *adjacent* or *vertical*. Then find the value of x.

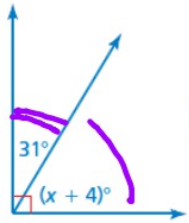
a.



Vertical

$x = 70$

b.



Adj

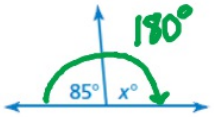
$31 + x + 4 = 90$

$x + 35 = 90$

$-35 \quad -35$

$x = 55$

3.



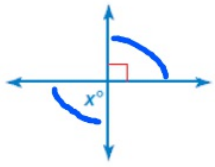
Adjacent

$85 + x = 180$

$-85 \quad -85$

$x = 95$

4.



Vertical

$x = 90$

Adjacent

$69 + (2x - 1) = 90$

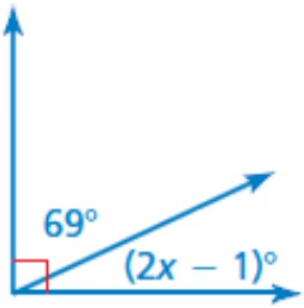
$2x + 68 = 90$

$-68 \quad -68$

$\frac{2x}{2} = \frac{22}{2}$

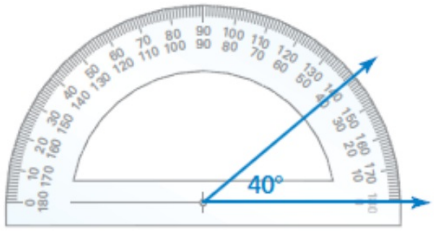
$x = 11$

5.

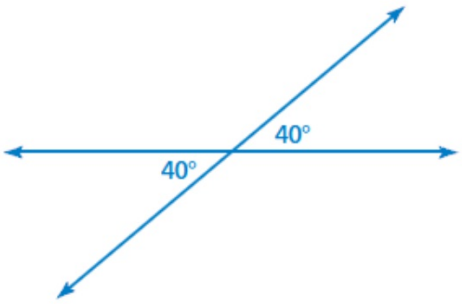


Using a protractor, draw a pair of vertical angles that measure 40°

Step 1: Use a protractor to draw a 40° angle.



Step 2: Use a straightedge to extend the sides to form two intersecting lines.



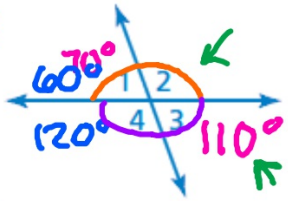
Determine whether the statement is *always*, *sometimes*, or *never* true.

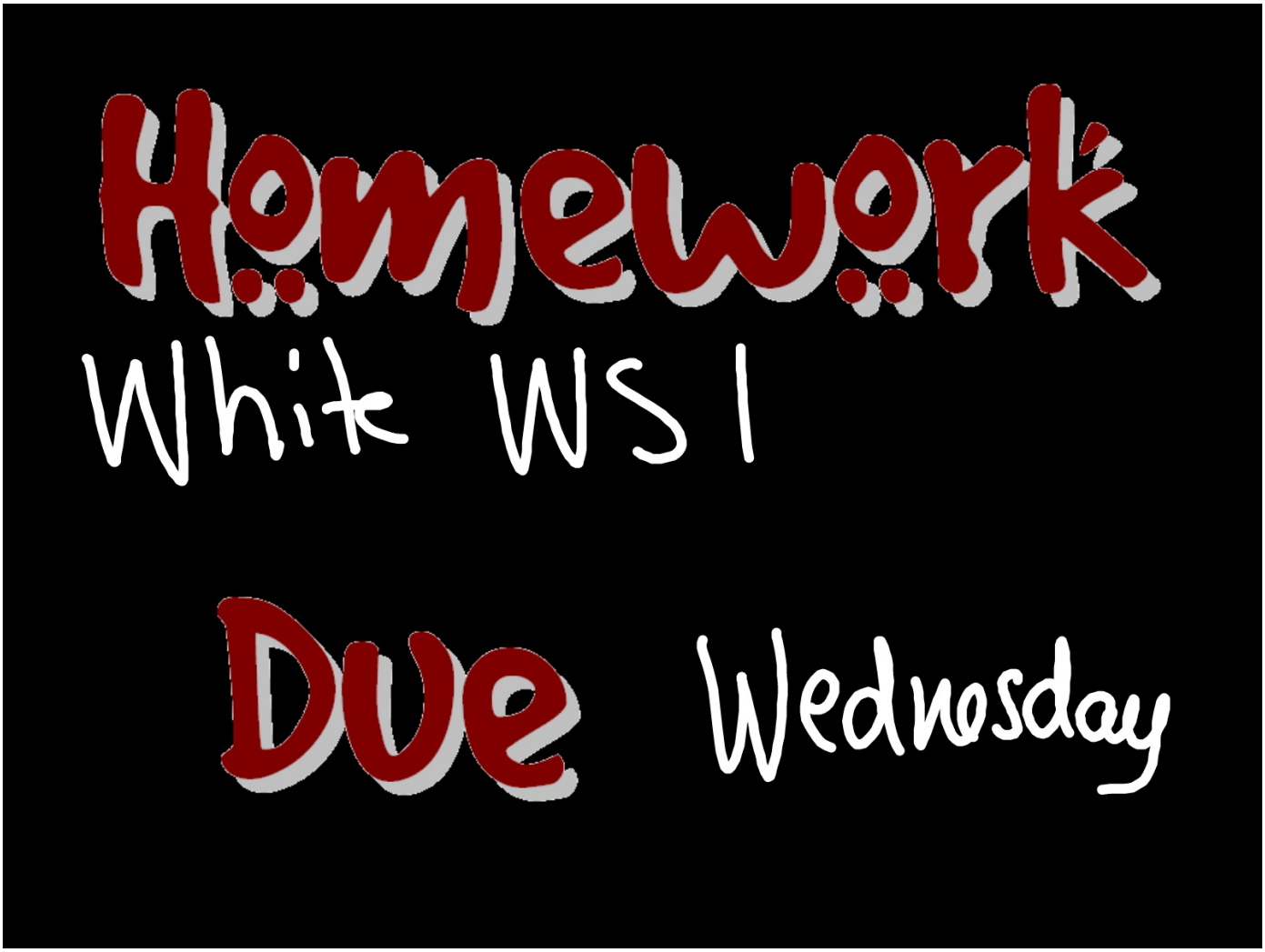
21. When the measure of $\angle 1$ is 70°, the measure of $\angle 3$ is 110°. Never

22. When the measure of $\angle 4$ is 120°, the measure of $\angle 1$ is 60°. Always

23. $\angle 2$ and $\angle 3$ are congruent. Sometimes

24. The measure of $\angle 1$ plus the measure of $\angle 2$ equals the measure of $\angle 3$ plus the measure of $\angle 4$. Always




Homework
Whit WS 1
Due Wednesday