SEMESTER 1 REVIEW!

1. Pause the problems and try to solve on your own

2. Watch me solve it!

Solving Equations

A. A video store charges a monthly membership fee of $8, but the charge to rent each movie is only $1 per movie. Another store has no membership fee, but it costs $3 to rent each movie. How many movies need to be rented each month for the total fees to be the same from either company?

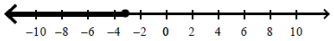
B. Solve for x in $2xy + w = 7$

Solving Inequalities

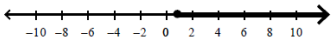
A. Ms. Johnson needs to have her car repaired but does not want to spend more than $160 for the repairs. The mechanic says the part needed will cost $35 and the labor will cost an additional $25 per hour. What is the greatest number of hours the mechanic can work with out exceeding Ms. Johnson's budget?

B. Solve and graph. $-2m + 4 \geq 2$

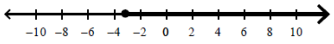
A. $m \leq -3$



B. $m \geq 1$



C. $m \geq -3$



D. $m \leq 1$

Scientific Notation

A. A virus is viewed under a microscope. Its diameter is 0.0000002 meter. How would this length be expressed in scientific notation?

B. Order from LEAST to GREATEST

$2.5 \times 10^{-5}, 2.3 \times 10^{-4}, 3 \times 10^{-5}$

C. A rectangular section of wilderness will be set aside as a new wildlife refuge. Its dimensions are 5×10^{5} meters by 4×10^{4} meters. Find the area of the land. Leave your answer in scientific notation.

Simplifying Exponents

A. $5x^3x^{-7}$

B. $\dfrac{3x^6y^{-4}}{z^{-2}w^0}$

C. $(3x^4y)(2x^3y^5)$

D. $\dfrac{x^5y^9}{(x^2y^3)^2}$

Simplifying Radicals

A. $\sqrt{25x^2y^5}$

B. $\sqrt{50}+2\sqrt{18}-2\sqrt{3}$

C. $\dfrac{\sqrt{7}}{\sqrt{2}}$

D. $\sqrt{5}(2\sqrt{4}+\sqrt{5})$

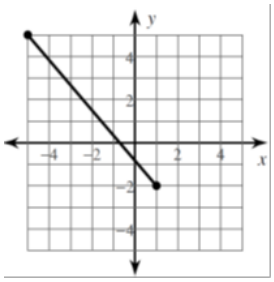
E. Which number below is rational?

5π $\sqrt{3}$ $\sqrt{49}$ $\dfrac{\sqrt{2}}{4}$

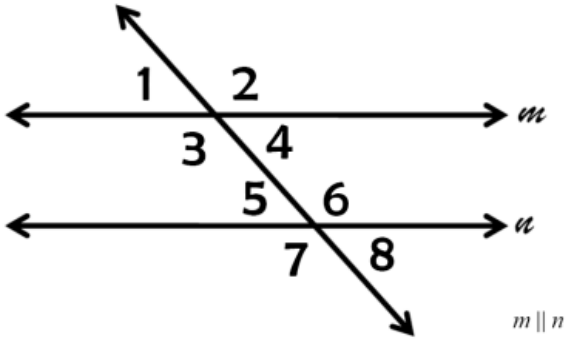
Pythagorean Theorem

A. The size of a flat screen TV is 52 inches, which is the diagonal length. The height of the TV is 32 inches. What is the minimum width that would be necessary to mount the TV to a wall?

B.



Angle Pairs

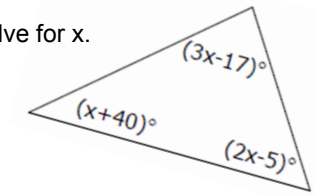


A. What type of angles are <7 and <2?

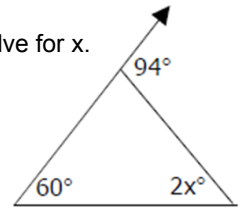
B. If m<1 = 50 and m<5= 2x + 8, find x.

Geometry Review

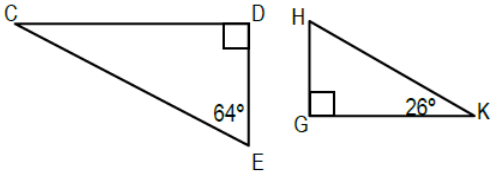
A. Solve for x.



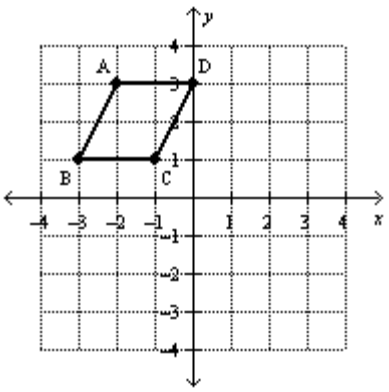
B. Solve for x.



C.



Transformations



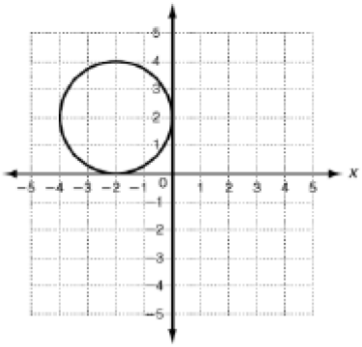
A. Dilate scale factor 2

B. Rotate 270° counterclockwise

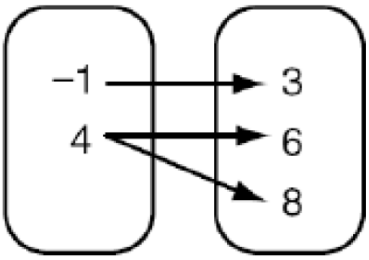
C. If the image of B is now (3, 1), describe the transformation.

Functions

A. Identify the function below.



X	Y
-3	1
-1	2
0	3
1	2
3	5



{(0,5), (5,-1), (5,9)}