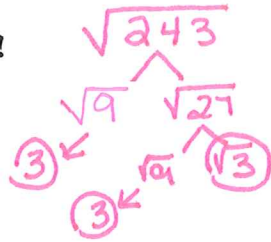


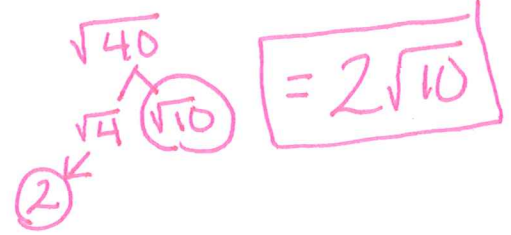
Unit One Quiz Review

Simplify... ALL the way!

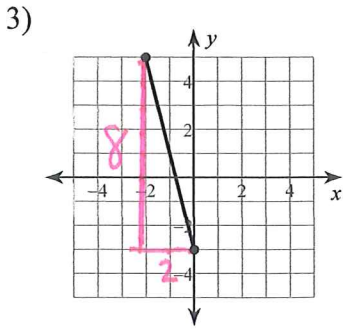
1) $\sqrt{243} = 3 \cdot 3 \sqrt{3} = 9\sqrt{3}$



2) $\sqrt{40} = 2\sqrt{10}$



Find the distance between each pair of points. Simplify radicals.



$2\sqrt{17}$

$8^2 + 2^2 = d^2$
 $64 + 4 = d^2$
 $\sqrt{68} = \sqrt{d^2}$
 $\sqrt{68} = 2\sqrt{17}$

4) (2, 6), (8, -3)
 $3\sqrt{13}$

I DON'T recommend using the formula!! If you mess up formula, there is NO way to earn pts!

$\sqrt{(2-8)^2 + (6-(-3))^2} = \sqrt{117}$
 $= \sqrt{(-6)^2 + (6+3)^2}$
 $= \sqrt{(-6)^2 + (9)^2}$
 $= \sqrt{36 + 81}$
 $d = 3\sqrt{13}$

Find the midpoint of the line segment with the given endpoints. Simplify fractions.

5) (-2, 5), (7, 6)
 $(2\frac{1}{2}, 5\frac{1}{2})$

$(\frac{-2+7}{2}, \frac{5+6}{2}) = (\frac{5}{2}, \frac{11}{2}) = (2\frac{1}{2}, 5\frac{1}{2})$

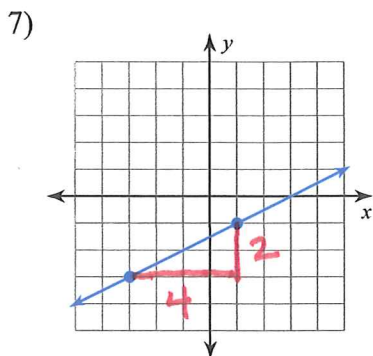
Find the other endpoint of the line segment with the given endpoint and midpoint.

6) Endpoint: (2, -2), midpoint: (-2, 9)
 $(-6, 20)$

$(\frac{x+2}{2}, \frac{y+(-2)}{2}) = (-2, 9)$
 $(-6, 20)$

You must write as a point.

Find the slope of each line. Simplify fractions.



$\frac{1}{2}$

This is just Rise over run! Slope has been reviewed for YEARS! You can no longer not care about slope!!

Positive $\frac{2}{4}$ You must simplify
 $m = \frac{1}{2}$

Find the slope of the line through each pair of points. Simplify fractions.

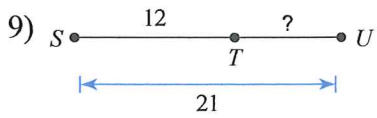
8) (7, -20), (5, -16)
 $m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{-16 - (-20)}{5 - 7} = \frac{-16 + 20}{5 - 7} = \frac{4}{-2} = -2$

$\frac{4}{-2} \neq \frac{-2}{1}$ This must be simplified!

You need to show this step and watch negatives. No points will be earned if you do not use negatives properly. This is basic.

Find the length indicated. You must show your GEOMETRY set up 1st, then you must justify each step.



9

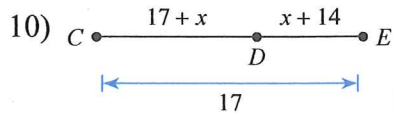
$$ST + TU = SU \quad \text{Segment addition}$$

$$12 + ? = 21 \quad \text{Substitution}$$

$$\begin{array}{r} -12 \\ -12 \end{array}$$

$$\boxed{? = 9} \quad \text{Subtraction}$$

Solve for x. You must show your GEOMETRY set up 1st, then you must justify each step.



-7

$$CD + DE = CE \quad \text{Segment addition}$$

$$17 + x + x + 14 = 17 \quad \text{Substitution}$$

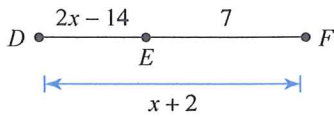
$$2x + 31 = 17 \quad \text{CLT}$$

$$2x = -14 \quad \text{Subtraction}$$

$$\boxed{x = -7} \quad \text{division}$$

Find the length indicated. You must show your GEOMETRY set up 1st, then you must justify each step.

11) Find DE



4

$$DE + EF = DF \quad \text{Segment Addition}$$

$$2x - 14 + 7 = x + 2 \quad \text{Substitution}$$

$$2x - 7 = x + 2 \quad \text{CLT}$$

$$x - 7 = 2 \quad \text{Subtraction}$$

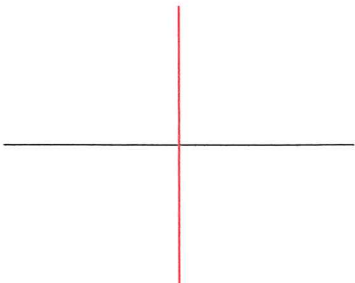
$$x = 9 \quad \text{addition}$$

$$DE = 2(9) - 14 \quad \text{Substitution}$$

$$\boxed{DE = 4} \quad \text{CLT}$$

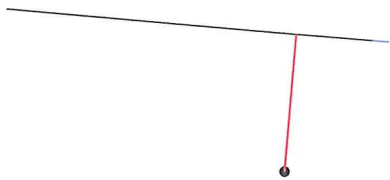
Construct the perpendicular bisector of each.

12)



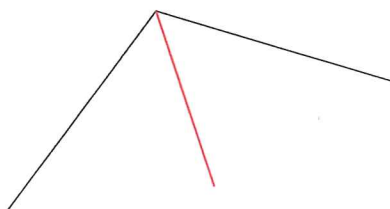
Construct a line segment perpendicular to the segment given through the point given.

13)



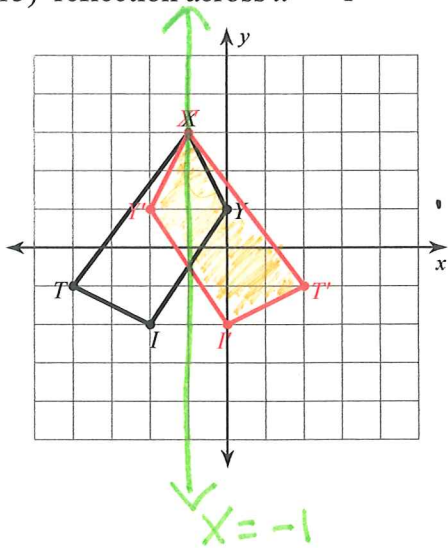
Construct the bisector of each angle.

14)

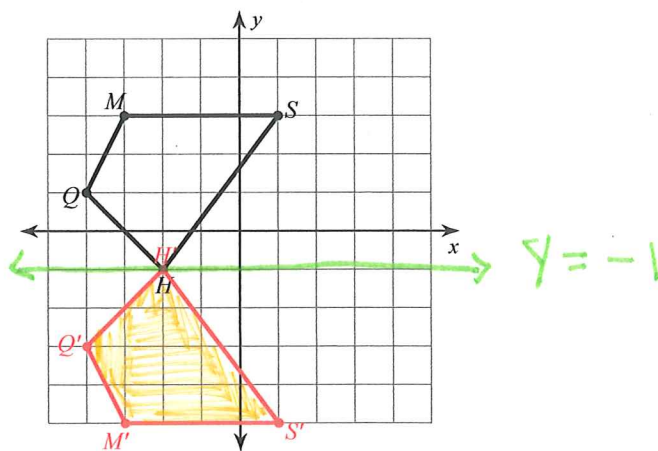


Graph the image of the figure using the transformation given.

15) reflection across $x = -1$

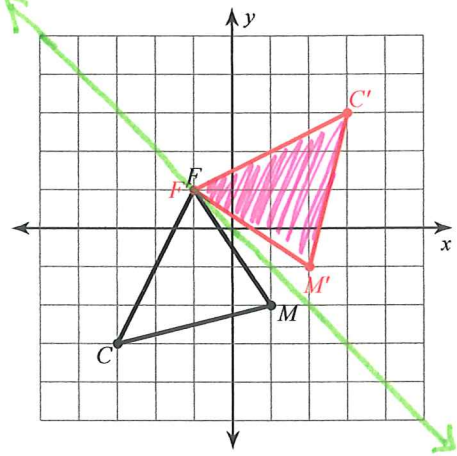


16) reflection across $y = -1$

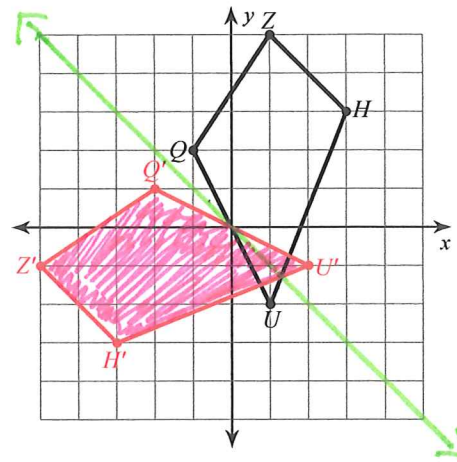


You must graph
line of reflection
first!

17) reflection across $y = -x$

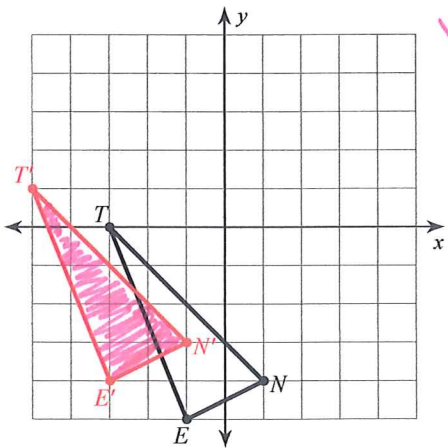


18) reflection across $y = -x$



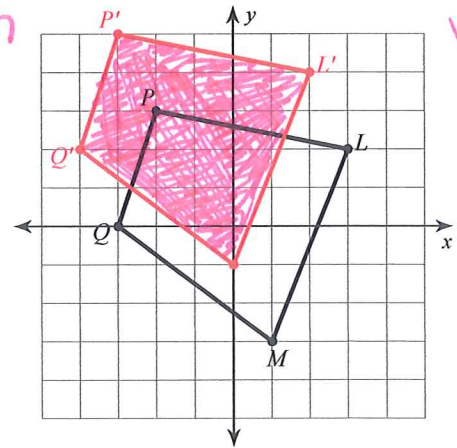
19) translation: $(x, y) \rightarrow (x - 2, y + 1)$

Vector Notation
 $\langle -2, 1 \rangle$

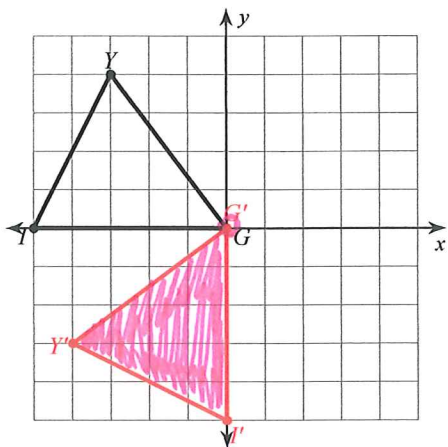


20) translation: $(x, y) \rightarrow (x - 1, y + 2)$

Vector Notation
 $\langle -1, 2 \rangle$



21) rotation 90° counterclockwise about the origin



22) rotation 180° about the origin

