

LESSON 44 Review: 1st Quarter

Let's review. Be sure to check the corresponding lesson(s) if you get any problem(s) wrong.

(Lesson 1) Simplify. Rationalize the denominator, if necessary.

1. $\sqrt{12} - \sqrt{27}$

2. $\frac{5}{\sqrt{5}} + \sqrt{45}$

(Lessons 2 & 5) Solve for x .

3. $2(x - 3) = 3x + 5$

4. $x^2 + 2x - 6 = 0$

(Lessons 4) Solve for x and y .

5. $2x + y = 7$

6. $2x + 5y = 10$

$3x - y = -2$

$4x - 3y = -6$

(Lesson 3) Write an equation of each line in slope-intercept form.

7. A line has a slope of -2 and passes through $(3, 2)$.

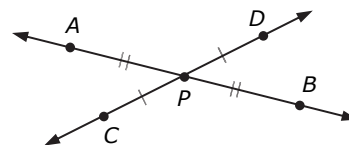
8. A line passes through $(1, 5)$ and $(0, -4)$.

(Lessons 6 & 7) Use the diagram on the right.

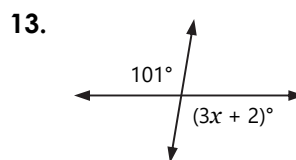
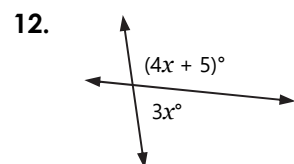
9. Name all sets of collinear points.

10. True or false? \overleftrightarrow{AB} and \overleftrightarrow{CD} intersect only at P .

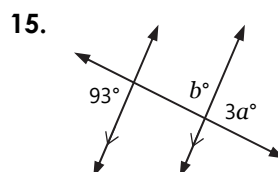
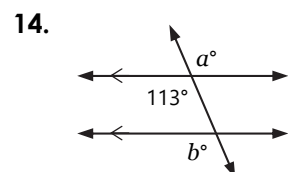
11. Find BP and AB if $AP = x + 5$ and $AB = 5x + 13$.



(Lesson 8) Find the value of x .

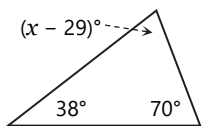


(Lessons 9 & 10) Find the values of the variables.

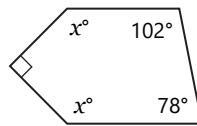


(Lessons 11 ~ 13) Find the values of the variables.

16.



17.



(Lessons 13 & 15) Solve.

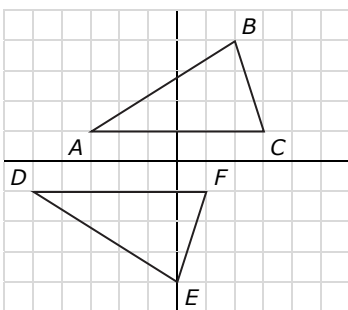
18. What are the measures of an interior angle and an exterior angle of a regular hexagon?
19. A regular polygon has an interior angle of 108° . How many sides does the polygon have?
20. What are the number of lines of symmetry and the angle of rotational symmetry of an equilateral triangle?

(Lessons 16 ~ 20) Solve.

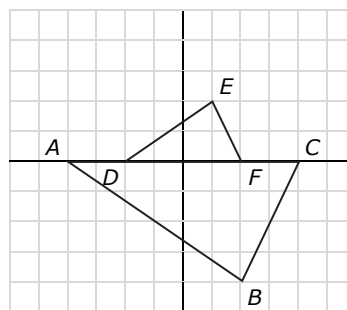
21. Write a rule for a translation that maps $A(2, 4)$ to $A'(5, -3)$.
22. What is the image of $B(-4, 5)$ after $r_{x\text{-axis}}$ (a reflection over the x -axis)?
23. What is the image of $C(1, -8)$ after $R_{O, 90^\circ}$ (a 90° counterclockwise rotation about the origin)?
24. What is the scale factor of a dilation centered at the origin that maps $D(2, -3)$ to $D'(8, -12)$?
25. Describe a single transformation that has the same effect as $r_{y=x} \circ r_{y=-x}$ (a reflection over $y = x$ after a reflection over $y = -x$).

(Lessons 20 & 21) Describe a sequence of transformations that maps $\triangle ABC$ to $\triangle DEF$.

26.



27.



(HONORS) Solve.

28. $\triangle XYZ$ is transformed to produce $\triangle X'Y'Z'$. What transformation was applied to $\triangle XYZ$ if $\triangle XYZ \cong \triangle X'Y'Z'$, $\overline{XX'} \parallel \overline{YY'} \parallel \overline{ZZ'}$, and $XX' = YY' = ZZ'$?
29. Line $y = x + 1$ is translated 3 units up and then reflected over the y -axis. Write an equation of the image in slope-intercept form. (*Hint:* Transform the x - and x - intercepts.)