

LESSON 132 Review: 1st Quarter

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

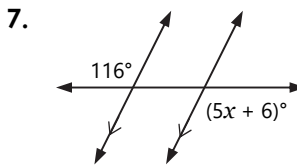
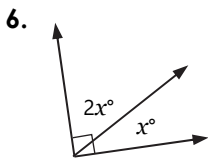
(Lessons 3 ~ 5) Solve.

1. A line passes through (2, 4) and (3, 6). Write an equation of the line in slope-intercept form.
2. Find the intersection of lines $x - y = 3$ and $2x + y = 3$ by solving the system of equations.
3. Solve $x^2 + 2x = 3$ by factoring and then by completing the square.

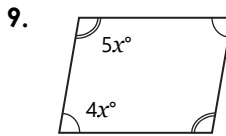
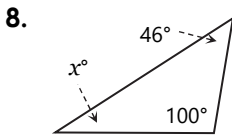
(Lessons 6 & 7) Solve.

4. Points A , B , and C are collinear such that $\overline{AB} \cong \overline{BC}$. Draw a diagram that fits this description.
5. Point Y is in the interior of $\angle XOZ$. $m\angle XOZ = 150^\circ$ and $m\angle XOY = 2m\angle YOZ$. Find $m\angle YOZ$.

(Lessons 8 ~ 10) Find the value of x .



(Lessons 11 ~ 12) Find the value of x .



(Lesson 13) Solve.

10. What are the measures of an interior angle and an exterior angle of a regular pentagon?
11. A regular polygon has an interior angle of 135° . How many sides does the polygon have?

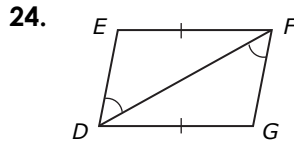
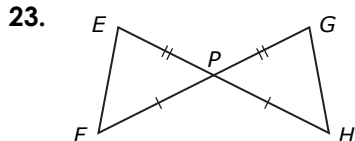
(Lessons 16 ~ 21) Solve. Assume all rotations and dilations are centered at the origin.

12. What is the image of $A(3, -4)$ after $r_{y\text{-axis}}$ (a reflection over the y -axis)?
13. What is the image of $B(1, 2)$ after $R_{O,90^\circ} \circ D_{O,2}$ (a 90° rotation after a dilation of factor 2)?
14. A figure is reflected over the x -axis and then over the y -axis. What single transformation produces the same final image of the figure?

(Lessons 23 ~ 25 & 27) Solve.

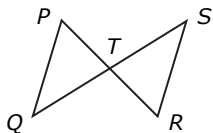
15. What comes next in the sequence 1, 11, 111, 1111, ...?
16. Give a counterexample to show that the following conjecture is false. Two triangles are congruent if three corresponding angles are congruent.
17. Write the following biconditional statement as two conditional statements. Two segments are congruent if and only if they have the same length.
18. What conclusion can you draw from the following two statements? If a figure is a rhombus, then it is a parallelogram. If a figure is a parallelogram, then it is a quadrilateral.
19. If $x + y = 7$ and $y = 4x$, then $x + 4x = 7$. What property justifies this statement?
20. If $\angle A \cong \angle B$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$. What property justifies this statement?
21. What property justifies the first step in solving $2x - 7 = 3$?
22. What is the first step to prove the following statement using indirect proof? If $\angle 1$ is not congruent to $\angle 2$, then $\angle 1$ and $\angle 2$ are not both right angles.

(Lessons 36 & 37) Determine if there is enough information to prove that the triangles are congruent. If so, write a congruence statement and state the congruence criterion you would use.



(Lessons 37 & 38) Complete the proof.

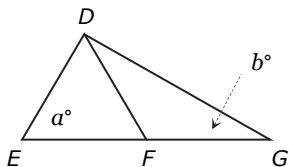
25. Given: $\overline{PQ} \cong \overline{RS}$,
 $\overline{PQ} \parallel \overline{RS}$
Prove: $\overline{PT} \cong \overline{RT}$



| STATEMENTS | REASONS |
|---|----------|
| 1. $\overline{PQ} \cong \overline{RS}, \overline{PQ} \parallel \overline{RS}$ | 1. Given |
| 3. $\angle P \cong \angle R, \angle Q \cong \angle S$ | 2. |
| 4. $\triangle PQT \cong \triangle RST$ | 3. |
| 5. $\overline{PT} \cong \overline{RT}$ | 4. |

(Lessons 11 & 40) Use the given information to find the values of the variables.

26. $\overline{DE} \cong \overline{EF} \cong \overline{DF} \cong \overline{FG}$



27. $\overline{RS} \cong \overline{RV}$ and $\overline{RT} \cong \overline{RU}$

