

Final Review Packet

THIS IS NOT EVERYTHING YOU NEED TO KNOW. IT'S A SMALL SAMPLE. SEE YOUR REVIEW TOPIC SHEET.

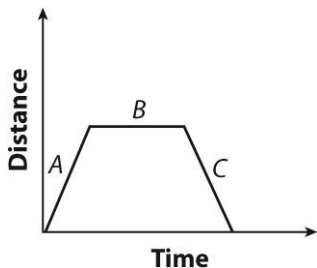
1. Solve the inequality $-\frac{3}{4} < \frac{y}{8} + 1\frac{1}{4}$.

2. Franco has x quarters, 12 one-dollar bills, and half as many ten-dollar bills as quarters. Write an expression that represents the amount of money Franco has in dollars.

2. What is the solution to

$$12x = -2(-6x + 7) + 14$$

4. The graph represents Lea's distance from home over time. What is happening at the part of the graph labeled "B"?



5. What is the fourth term of a sequence with the recursive rule $f(1) = -3.5$; $f(n) = -2f(n-1)$ for $n > 1$?

6. What are the x - and y -intercepts of

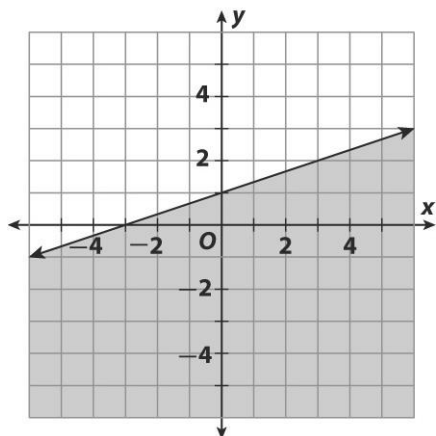
$$7x - \frac{7}{2}y = -49?$$

7. What is the slope of a line that contains the points $(-3, 7)$ and $(7, 2)$?

8. Alex is buying drinks and snacks for a party and wants to spend less than \$45. Drinks cost \$2 each, and snacks cost \$4 each. He needs to buy at least 11 drinks and snacks altogether. Write a system that represents this situation.

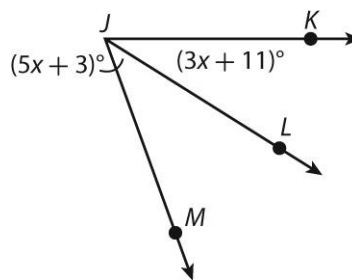
9. A motorcycle with an initial value of \$14,000 is decreasing in value at a rate of 3% each year. At this rate, approximately what will the value of the motorcycle be in 9 years?

10. Which inequality is shown on the graph?



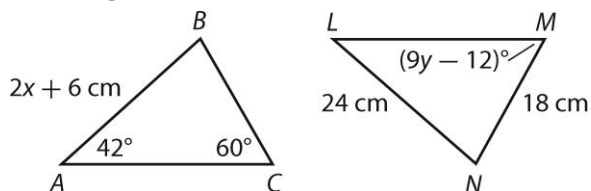
11. Which is a recursive rule for the arithmetic sequence 22, 15, 8, 1....?

12. The sum of the measures of two angles is 180° . The difference between the angle measures is 70° . What is the measure of the smaller angle?
- _____



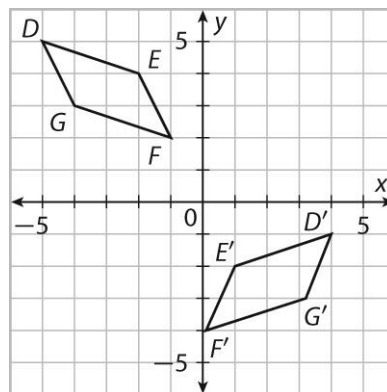
13. What is the value of x ?
- _____

Use the following information for 53–54.
In the figures below, $\triangle ABC \cong \triangle LMN$



14. What is the value of x ?
- _____

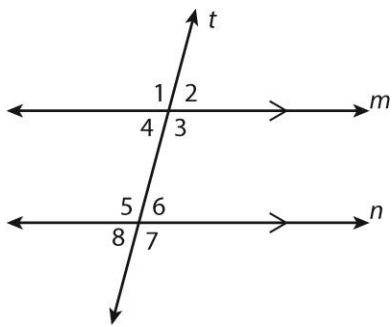
15. What is the value of y ?
- _____



16. What transformations can you use to show that quadrilaterals $DEFG$ and $D'E'F'G'$ are congruent?
- _____
- _____

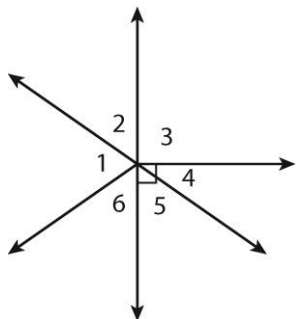
17. In the figure, $m\angle 2 = 75^\circ$.

In the figure, $m\angle KJL = 32^\circ$.



What is $m\angle 7$?

18. In the figure, the measure of $\angle 2$ is 55° .

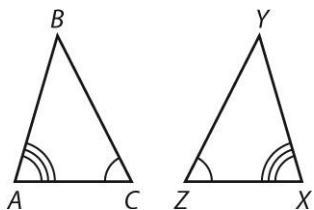


What is the measure of $\angle 4$?

_____ 62.

_____ Use the figures.

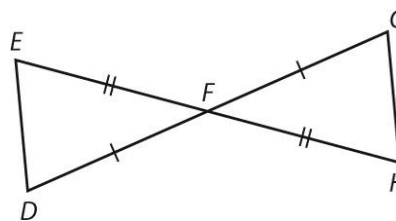
For 63–64, state the additional congruency statement or statements needed to prove $\triangle ABC \cong \triangle XYZ$ for the given theorem.



19. ASA Theorem

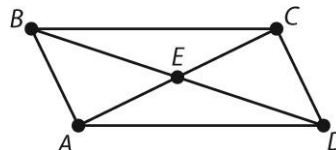
20. AAS Theorem

21. Look at the figure below.



Are triangles DEF and GHF congruent? Explain why or why not. If the triangles are congruent, write a congruence statement.

22. $ABCD$ is a quadrilateral with $\overline{BE} \cong \overline{ED}$ and $\angle BCD \cong \angle DAB$.

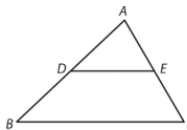


If $EC = 16$ cm, $m\angle ABC = 64^\circ$, $AE = 3x - 5$, and $m\angle DAB = (4y - 12)^\circ$, for which values of x and y is $ABCD$ a parallelogram?

23. State whether each quadrilateral has congruent diagonals.

- A parallelogram Yes No
- B rhombus Yes No
- C rectangle Yes No
- D isosceles trapezoid Yes No
- E kite Yes No

24.



In the figure, $\overline{DE} \parallel \overline{BC}$ and $BC = 2 DE$.

If $AB = 8$, then $AD =$ _____.

If $CE = 4$, then $CA =$ _____.

25. a. Complete the frequency table.

Gender	Preferred Pet			Total
	Dog	Cat	Fish	
Male		197	16	323
Female	180		12	
Total	290			565

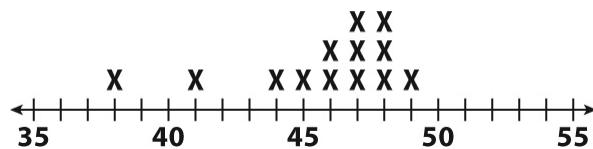
- b. How many males prefer dogs?

- c. How many females do not prefer cats?

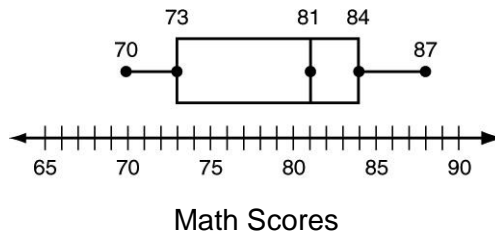
26. Ana interviewed 125 people to see if they liked jogging. Thirty five of the people surveyed were males. Fifty four females like jogging, and 23 males liked jogging. What is the conditional frequency that a person does not like jogging given that the person is a female?

3. What is the mean, median, and mode of the data set {32, 35, 35, 45, 49, 50}?

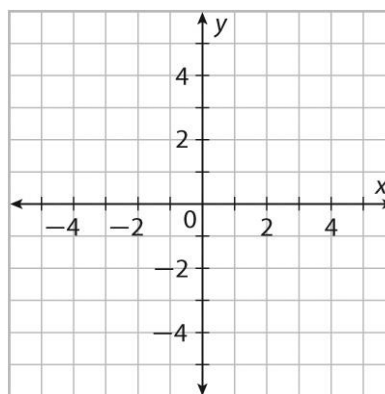
27. Describe the distribution of the dot plot below.



28. What is the interquartile range of the data represented on the plot below?

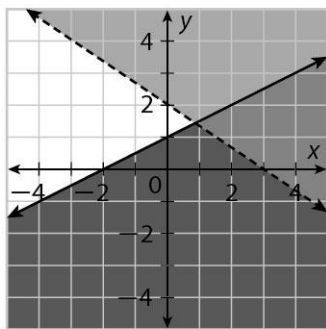


29. Graph and solve $\begin{cases} 2x + y = -1 \\ y = -5x + 2 \end{cases}$



30. What is the solution to the system $\begin{cases} 3y = 5x + 22 \\ y = -5x + 8 \end{cases}$?

32. Meredith has \$5.10 in quarters and dimes. She has 24 coins in all. How many quarters and how many dimes does she have?



33. Write the system of inequalities represented by the graph.

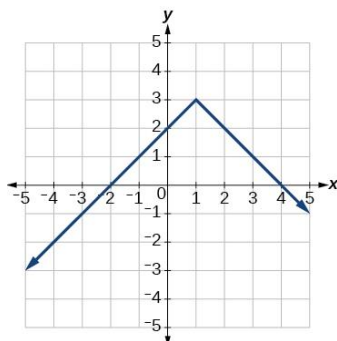
34. Simplify

$$\frac{2x^2y^4 \cdot 4x^2y^4 \cdot 3x}{3x^{-3}y^2}$$

35. Simplify

$$\frac{(2x^3z^2)^3}{x^3y^4z^2 \cdot x^{-4}z^3}$$

36. What is the domain and range of the graph?



37. Simplify

$$3\sqrt{150}$$

38. A suitcase measures 24 inches long and 16 inches high. What is the diagonal length of the suitcase? Write your answer in simplest radical form.

39. Simplify. Write your answer in standard form.

$$(7 - 13x^3 - 11x) - (2x^3 + 8 - 4x^5)$$

40. Multiply.

$$(7x - 6)(5x + 6)$$

41. Find the area of the shaded region.

