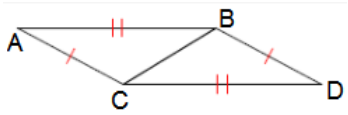
Sec I – Term 2 Special Triangles Name_____ ID: 1

Term 2 Review Date_____Period_____

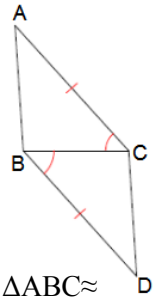
Decide if the following triangles are congruent using ASA, AAS, SSS or SAS. If there isn't enough information to decide, write "Not Enough Info." If the triangles are congruent, name the congruency and tell which congruency rule you used.

1.



ΔABC≈_____

2.



ΔABC≈_____

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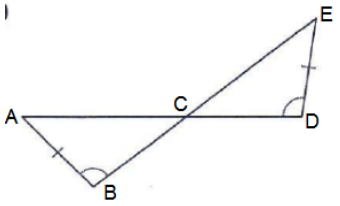

ΔABC≈_____

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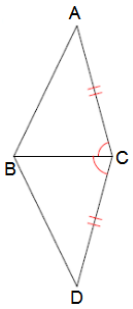

ΔABC≈_____

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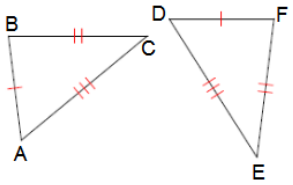

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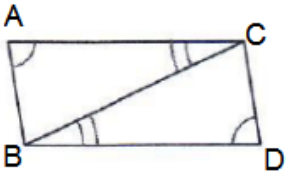

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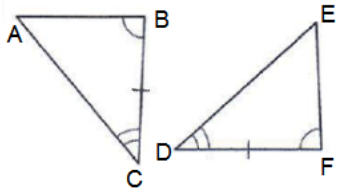
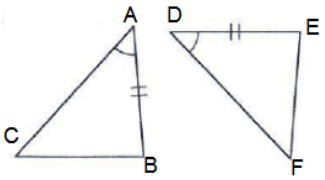


ΔABC≈_____

8.



ΔABC≈_____

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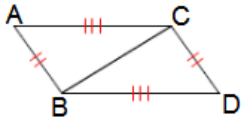


ΔABC≈_____

Describe the result of applying each transformation to a figure $\left[A(x, y)\right]$ in the coordinate plane. Be specific with direction and distance.

10. $H(x, y) = (x - 2, y + 3)$

11. $D(x, y) = (x, y - 6)$

12. $R(x, y) = (x + 3, -y)$

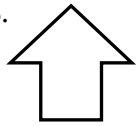
13. $G(x, y) = (x, -y - 4)$

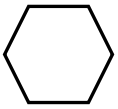
Write the rule for each transformation described below for a given (x, y) coordinate.

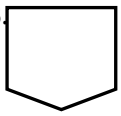
14. translation 6 units right and 4 units down

15. reflection across the *x*-axis and translated up 3 units

Name each polygon by the number of sides and decide if each polygon is convex or concave.

13. 

17. 

18. 

19. 

Find the measure of the total interior angles and each interior angle of a regular polygon given the number of sides.

20. n = 8

Total int. ∠ = _____
Each int. ∠ = _____

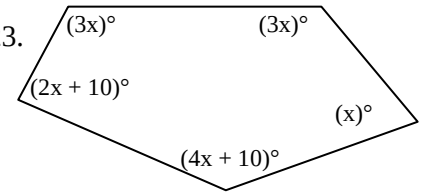
21. n = 5

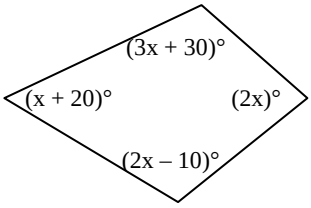
Total int. ∠ = _____
Each int. ∠ = _____

22. n = 10

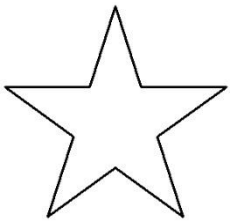
Total int. ∠ = _____
Each int. ∠ = _____

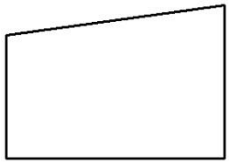
Solve for *x*. Show your work (Hint: find the total sum of the degrees first!

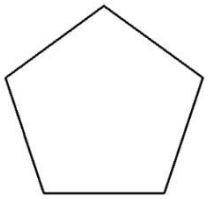
23. 

24. 

Name the polygon and draw the lines of symmetry and order of rotation for each polygon.

25. 

26. 

27. 

Translate each phrase into an algebraic expression or equation.

28. A number more than 7 is 18 Expression OR Equation

29. The quotient of 3 and a number squared Expression OR Equation

30. 8 less than a number is 12 Expression OR Equation

31. The product of a number and -5 Expression OR Equation

32. In a triangle, the first angle is three times the measure of the second and the third is 2 times as much as the second. Find the measure of each angle.

33. In a pentagon, the second angle is twice the first, the third and fourth angle is twice the first and the fifth angle is the same as the first. Find the measure of each angle.

34. A bag of marbles has a mixture of red, blue, green and yellow marbles. The number of blue and green marbles is the same. There are twice as many yellow marbles as blue marbles and there are 25 red marbles. If there is a 85 total marbles in the bag, how many of marbles are there for each color?

35. Bryce is training for the state cross country race and set a goal of 135 miles before the race. The second week he doubled the number of miles he ran the first week. The third week he ran the same as the first week plus 15 miles more. The fourth week before the race he ran the same as the second week. IF Bryce met his goal, how many miles did he run each week.

Name the property of each statement.

36. If $10 = 4x-2$, then $12 = 4x$.

_____

37. If $2x = 100$, then $x = 50$.

_____

38. If $10 = 2y$ and $2y = x$, then $10 = x$.

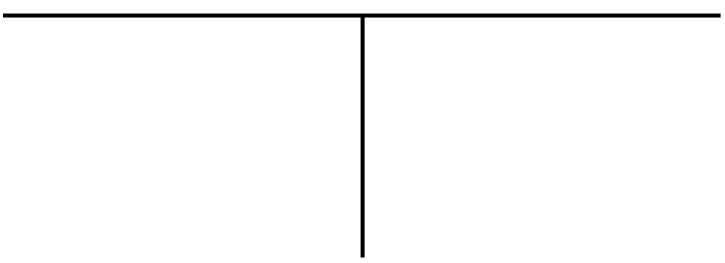
_____

39. If $x + 30 = 90$, then $x = 600$.

_____

Solve each algebraic proof. Make sure to justify each step

40. Given: $6(x + 1) + 2x = 30$
Prove: $x = 4$



41. The cost of a birthday party at Jump-On-It! is $200 plus $2 per person. The cost for Fletcher's party came to $224. How many people came to his party?

42. Your new job pays you a bonus of $150 each month plus $14 an hour for each hour you work. If you work 160 for the month, how much money will you make.

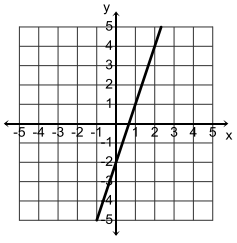
43. A cell phone company charges $40 per month plus $6.25 per gigabyte of data. If Tim's cell phone bill for last month came to $100, how gigabytes of data did Tim use?

44. Bob's Painting Service charges $100 per job and $0.20 per square foot. If Bob earns $650 for painting one job, how many square feet did he paint at the job?

Formulas: $m = \frac{\text{rise}}{\text{run}} = \frac{y-y}{x-x}$ $y = mx + b$ $y - y_1 = m(x - x_1)$

Write an equation in slope-intercept form using the given information about the line. Then match your answer with an equation on the right-hand side.

45.



46.

x	y
-2	0
0	3
2	6
4	9

47. Mike has already drank 4 cups of water and continues to drink his water at a rate of one-half cup per hour

48. $m = \frac{1}{2}$, point $(6, -1)$