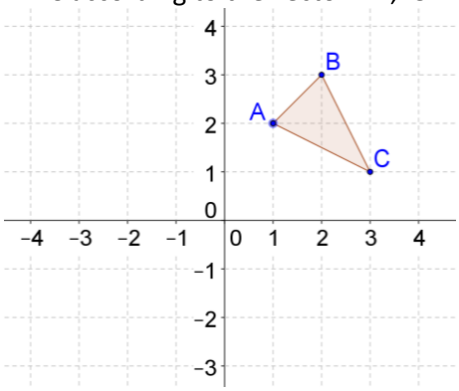
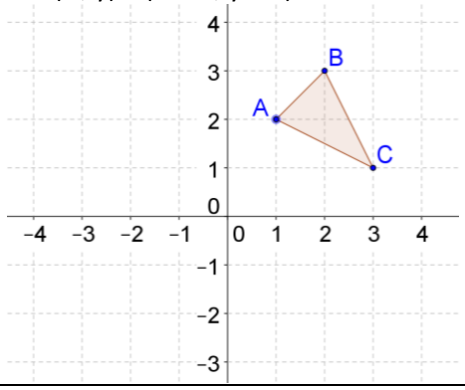
Common Core Math 2 Unit 1 Test Review Name _____

1. Transformations

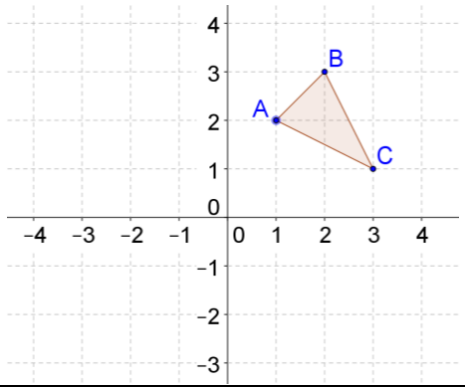
a. Translate ΔABC according to the vector <1 , -3>



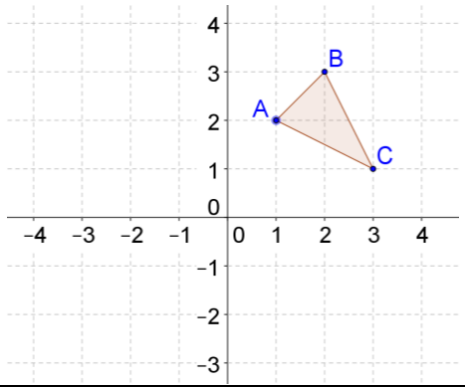

b. Translate ΔABC according to the following algebraic rule (x , y)→(x – 4 , y + 1)



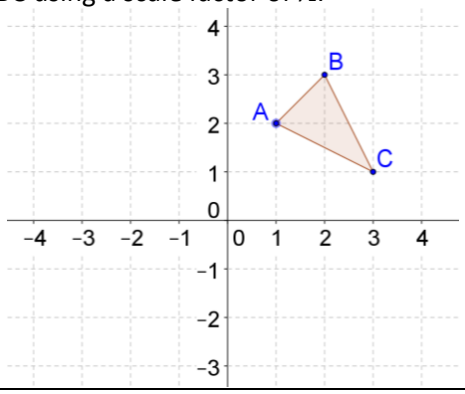

c. Rotate ΔABC 90˚ clockwise.



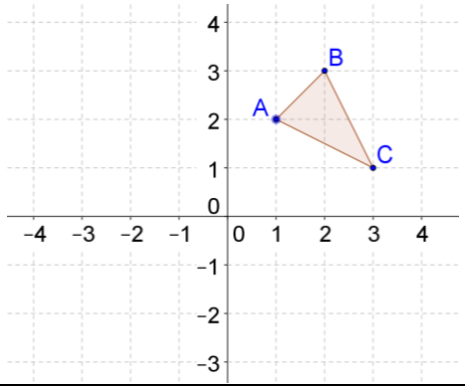

d. Reflect ΔABC over the x-axis




e. Dilate ΔABC using a scale factor of ½.




f. Rotate ΔABC 180˚.




2. Solve the proportions

a. $\frac{7}{x} = \frac{21}{12}$

x = _____

b. $\frac{5}{8} = \frac{3x+2}{5x+2}$

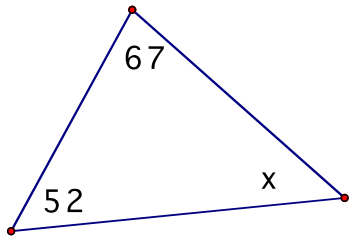
x = _____

c. $\frac{6x-2}{8} = \frac{2x+1}{3}$

x = _____

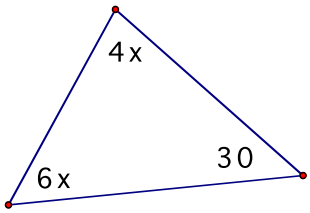
3. Triangle Angle Sum Theorem –
   a. The sum of the 3 angles of a triangle equals _____.

b. Solve for x.



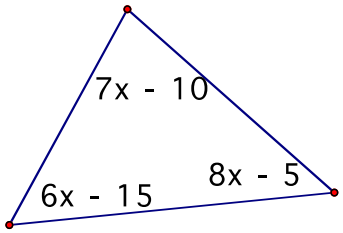

x = _____

c. Solve for x.




x = _____

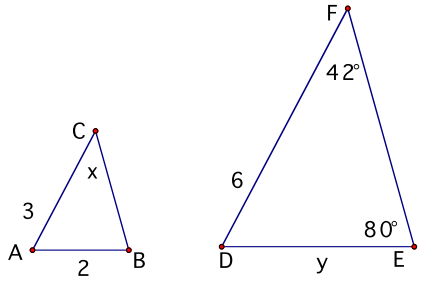
d. Solve for x.




x = _____

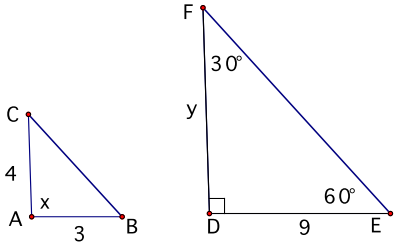
4. Similar triangles
   a. If 2 triangles are similar then the corresponding angles are _____
   b. If 2 triangles are similar then the corresponding sides are _____

c. $\triangle ABC \sim \triangle DEF$



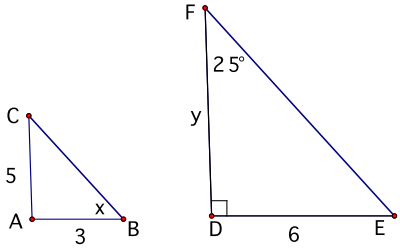

x = _____ y = _____

d. $\triangle ABC \sim \triangle DEF$




x = _____ y = _____

e. $\triangle ABC \sim \triangle DEF$

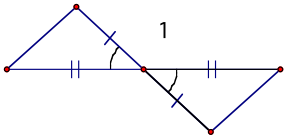



x = _____ y = _____

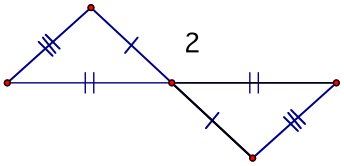
5. Congruent triangles SAS, SSS, ASA (CPCTC – matching from a congruence statement)
   a. Two triangles are congruent if they have exactly the same _____ and exactly the same _____.
   b. The three postulates that can be used to prove 2 triangles must be congruent are _____, _____, _____
   c. AAA (is / is not) a valid postulate to guarantee that two triangles are congruent.
   d. SSA (is / is not) a valid postulate to guarantee that two triangles are congruent.

Match the diagrams to the postulates they illustrate

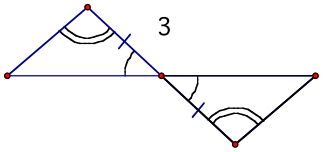
_____ e. SSS




_____ f. ASA




_____ g. SAS



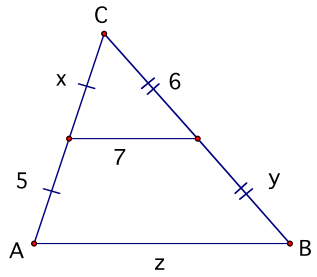
6. Solve for x.

| | | |
|---|---|---|
| a. $3x+4=25$ | b. $(7x-3)+(8x-2)=130$ | c. $10x-13=7x+2$ |

7. Midpoint
   a. A midpoint bisects a segment into _____
   b. Celeste is standing at the corner of -2nd street and -4th avenue (-2,-4). She starts walking towards her friend Ernesto's house. When she reaches the corner of 3rd street and 6th avenue (3,6) she has walked exactly half the distance. Where is Ernesto's house?

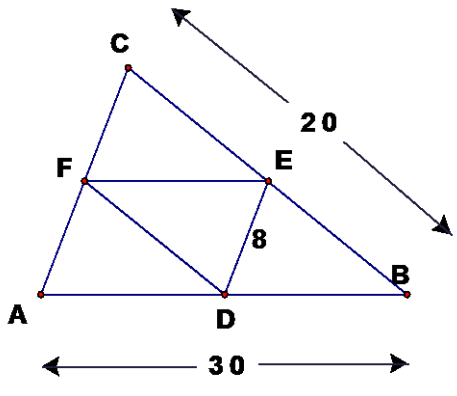
   c. What are the coordinates of the midpoint between A(-4, 5) and B(2, 8)?

8. Triangle Midsegment
   a. A midsegment connects the _____ of two sides of a triangle.
   b. The length of the Midsegment is _____ the length of the 3rd side of the triangle.
   c. In the diagram below x = _____, y = _____, and z = _____.

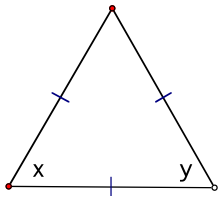



   d. In the diagram below, D, E, and F are all midpoints of triangle ABC. Determine the lengths.

| | |
|---|---|
| AB = _____ | FD = _____ |
| BC = _____ | DE = _____ |
| AC = _____ | FE = _____ |
| AD = _____ | CE = _____ |



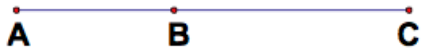
9. Equilateral Triangles




x = _____ y = _____

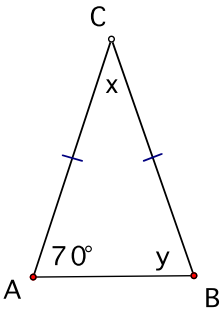
10. Segment Addition

AB = 5*x* – 3 BC = 10*x* + 4 AC = 94



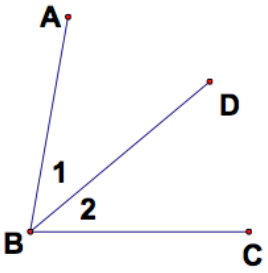

$x =$ _____

11. Isosceles Triangles




x = _____ y = _____

12. Angle Addition




$m\angle 1 = 7x - 2$

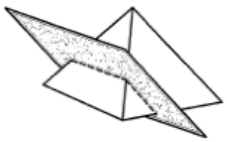
$m\angle 2 = 5x + 5$

$m\angle ABC = 75°$

x = _____

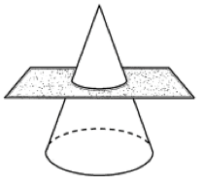
13. Match the shape with the cross-section

1.



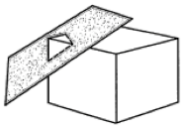
Answer: _____

2.



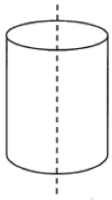
Answer: _____

3.



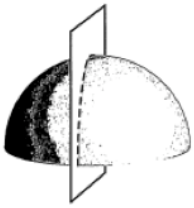
Answer: _____

4.



Answer: _____

5.



Answer: _____

Answer bank: A. Rectangle B. Semicircle C. Trapezoid D. Circle E. Triangle

Answers:

| | | |
|---|---|---|
| 2a. x = 4 b. x = 6 c. x = 7<br>3a. 180 b. x = 61 c. x = 15 d. x = 10<br>4a. congruent (or equal)<br>4b. proportional<br>c. x = 42, y = 4 d. x = 90, y = 12<br>e. x = 65, y = 1- | 5a. size, shape 6b. SSS, SAS, ASA<br>5c. is not 5d. is not<br>5e. 2 5f. 3 5g. 1<br>6a. x = 7 b. x = 9 c. x = 5<br>7a. 2 equal parts b. (8,16) c. (-1,6.5) | 8a. midpoints, b. half<br>8c. x = 5, y = 6, z = 14<br>8d. AB=30, BC=20, AC=16, AD=15<br>FD=10, DE=8, FE=15, CE=10<br>9. x=60 y=60 10. x=6.2<br>11. X=40, y=70 12. x=6<br>13. 1C, 2D, 3E, 4A, 5B |