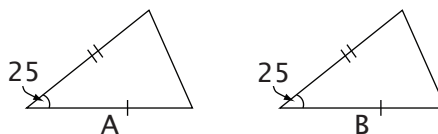


12. A: 1 liter  $\approx$  1.06 quarts
13. B: by definition
14. C: The sum of the measures of the interior angles of a triangle is  $180^\circ$ .
15. B: by definition

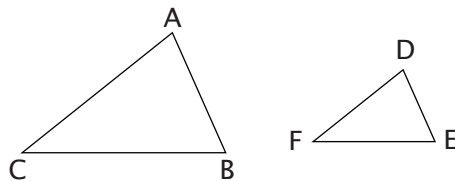
## Test 12

1. B: A, C and D are equations whose highest exponent is 2. The quadratic equation works for equations of this nature only.
2. B:  $\frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$
3. C: All quadratic equations have constants A, B and C, which can be substituted into the quadratic formula. Not every quadratic equation can be factored.
4. C: Standard form provides A, B and C with the proper sign
5. A:  $7X^2 + 2X - 1 = 0$   
A = 7; B = 2; C = -1
6. A:  $X^2 - 36 = 0$   
 $(X - 6)(X + 6) = 0$   
 $X - 6 = 0 \quad X + 6 = 0$   
 $X = 6 \quad X = -6$
7. D:  $X^2 + 3X + 3 = 0$   
A = 1; B = 3; C = 3  
$$X = \frac{-(3) \pm \sqrt{(3)^2 - 4(1)(3)}}{2(1)} =$$
$$\frac{-3 \pm \sqrt{9 - 12}}{2} = \frac{-3 \pm \sqrt{-3}}{2} = \frac{-3 \pm i\sqrt{3}}{2}$$

8. B:  $5X^2 + 2X - 1 = 0$   
A = 5; B = 2; C = -1  
$$X = \frac{-(2) \pm \sqrt{(2)^2 - 4(5)(-1)}}{2(5)} =$$
$$\frac{-2 \pm \sqrt{4 - (-20)}}{10} = \frac{-2 \pm \sqrt{4 + 20}}{10} =$$
$$\frac{-2 \pm \sqrt{24}}{10} = \frac{-2 \pm \sqrt{4} \sqrt{6}}{10} =$$
$$\frac{-2 \pm 2\sqrt{6}}{10} = \frac{-1 \pm \sqrt{6}}{5}$$
9. D:  $4X^2 + 20X + 25 = 0$   
 $(2X + 5)(2X + 5) = 0$   
 $2X + 5 = 0$   
 $2X = -5$   
 $X = -\frac{5}{2}$
10. C:  $4X^2 + 4X - 10 = 0$   
A = 4; B = 4; C = -10  
$$X = \frac{-(4) \pm \sqrt{(4)^2 - 4(4)(-10)}}{2(4)} =$$
$$\frac{-4 \pm \sqrt{16 - (-160)}}{8} = \frac{-4 \pm \sqrt{16 + 160}}{8} =$$
$$\frac{-4 \pm \sqrt{176}}{8} = \frac{-4 \pm \sqrt{16} \sqrt{11}}{8} =$$
$$\frac{-4 \pm 4\sqrt{11}}{8} = \frac{-1 \pm \sqrt{11}}{2}$$
11. C:  $\overline{ED}$
12. B: A rhombus and a parallelogram have 2 pairs of parallel sides. A regular polygon may have any number of sides.
13. C: SAS stands for side angle side.



14. D: Knowing that the angles of one triangle are the same as the angles of another triangle proves similarity, not congruence.



15. A: 1 yard  $\approx$  .9 meters

### Test 13

1. B: real, rational, equal
2. A: real, rational, unequal
3. D: imaginary
4. C: real, irrational, unequal
5. C:  $X^2 + X = X + 9$   
 $X^2 - 9 = 0$   
 $A = 1; B = 0; C = -9$   
 $B^2 - 4AC \Rightarrow (0)^2 - 4(1)(-9) =$   
 $0 - (-36) =$   
 $0 + 36 = 36$
6. D:  $X^2 + 5 = 2X$   
 $X^2 - 2X + 5 = 0$   
 $A = 1; B = -2; C = 5$   
 $B^2 - 4AC \Rightarrow (-2)^2 - 4(1)(5) =$   
 $4 - 20 = -16$
7. B:  $X^2 + 9 = -6X$   
 $X^2 + 6X + 9 = 0$   
 $A = 1; B = 6; C = 9$   
 $B^2 - 4AC \Rightarrow (6)^2 - 4(1)(9) =$   
 $36 - 36 = 0$

8. A:  $X^2 - 32 = -4X$   
 $X^2 + 4X - 32 = 0$   
 $X = \frac{-(-4) \pm \sqrt{(4)^2 - 4(1)(-32)}}{2(1)} =$   
 $\frac{-4 \pm \sqrt{16 - (-128)}}{2} = \frac{-4 \pm \sqrt{144}}{2} =$   
 $\frac{-4 \pm 12}{2} = \frac{-2 \pm 6}{1} = -2 \pm 6$   
 $X = 4; X = -8$

9. A:  $X^2 + 3X - 6 = 0$   
 $X = \frac{-(3) \pm \sqrt{(3)^2 - 4(1)(-6)}}{2(1)} =$   
 $\frac{-3 \pm \sqrt{9 - (-24)}}{2} = \frac{-3 \pm \sqrt{9 + 24}}{2} =$   
 $\frac{-3 \pm \sqrt{33}}{2}$

10. C:  $X^2 - 5X = -8$   
 $X^2 - 5X + 8 = 0$   
 $X = \frac{-(-5) \pm \sqrt{(-5)^2 - 4(1)(8)}}{2(1)} =$   
 $\frac{5 \pm \sqrt{25 - 32}}{2} = \frac{5 \pm \sqrt{-7}}{2} = \frac{5 \pm i\sqrt{7}}{2}$

11. D: A and B are not true, C is true, but does not prove triangles congruent.

12. B:  $62,000 \times .75 =$   
 $(6.2 \times 10^4)(7.5 \times 10^{-1}) =$   
 $(6.2 \times 7.5)(10^4 \times 10^{-1}) =$   
 $46.5 \times 10^3 = 4.65 \times 10^4$

13. A: similar  
 14. D: They are mirror images of each other.  
 15. A: The figure has been translated or moved over 2 and down 6.

### Test 14

1. C:  $250 - 200 = \$50$  saved  
 $WP \times 250 = 50$   
 $WP = \frac{50}{250}$   
 $WP = \frac{1}{5} = .20 = 20\%$