

7-46. See below:

- $\triangle ADC$; AAS \cong ; Reflection across \overline{AC} .
- not enough information
- $\triangle TZY$; AAS \cong or ASA \cong , Rotate 180° about point Y .

7-47. See below:

- The 90° angle is reflected, so $m\angle XZY' = 90^\circ$. Then $m\angle YZY' = 180^\circ$.
- They must be congruent, because rigid transformations (such as reflection) preserve angles measures and side lengths.
- $\overline{XY} \cong \overline{XY'}$, $\overline{XZ} \cong \overline{X'Z}$, $\overline{YZ} \cong \overline{Y'Z}$, $\angle Y \cong \angle Y'$, $\angle YXZ \cong \angle Y'XZ$, and $\angle YZX \cong \angle Y'ZX$

7-48. See below:

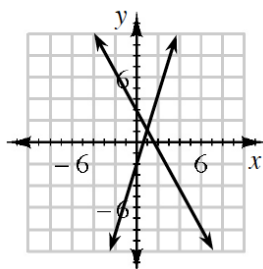
- $a_1 = 108$, $a_{n+1} = a_n + 12$
- $a_1 = \frac{2}{5}$, $a_{n+1} = 2a_n$
- $t(n) = 3780 - 39n$
- $t(n) = 585(0.2)^n$

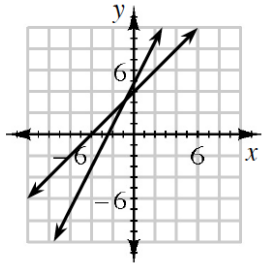
7-49. See below:

- 15°
- $x = 12^\circ$; $m\angle D = 4(12^\circ) + 2^\circ = 50^\circ$
- It is equilateral.

7-50. See graphs below.

- (1, 1)



b. $(-1, 3)$ 

7-51. D