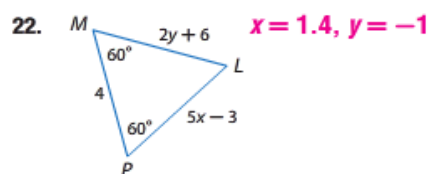# LT 2.3 Homework
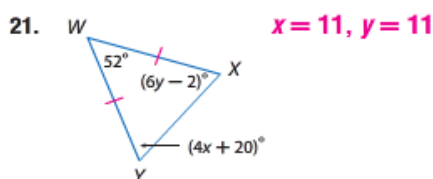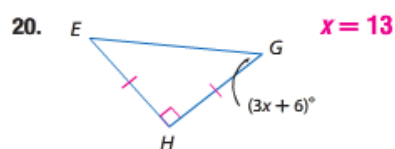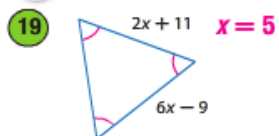
Example 1 — Refer to the figure at the right.

9. If $\overline{AB} \cong \overline{AE}$, name two congruent angles. **∠ABE and ∠AEB**

10. If ∠ABF ≅ ∠AFB, name two congruent segments. **$\overline{AB}$ and $\overline{AF}$**

11. If $\overline{CA} \cong \overline{DA}$, name two congruent angles. **∠ACD and ∠ADC**

12. If ∠DAE ≅ ∠DEA, name two congruent segments. **$\overline{AD}$ and $\overline{DE}$**

13. If ∠BCF ≅ ∠BFC, name two congruent segments. **$\overline{BF}$ and $\overline{BC}$**

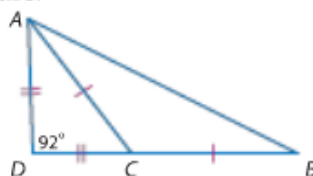14. If $\overline{FA} \cong \overline{AH}$, name two congruent angles. **∠AFH and ∠AHF**
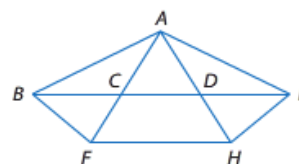
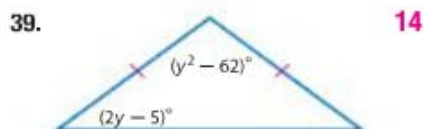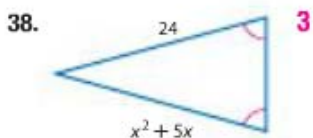**Example 3** — **CCSS REGULARITY** Find the value of each variable.

19. $2x + 11$; $6x - 9$ **$x = 5$**

20. E, G, H, $(3x + 6)°$ **$x = 13$**

21. W, $52°$, $(6y - 2)°$, X, $(4x + 20)°$, Y   **$x = 11, y = 11$**

22. M, $60°$, $2y + 6$, L, 4, $60°$, $5x - 3$, P   **$x = 1.4, y = -1$**

CCSS REGULARITY Find each measure.

29. $m∠CAD$ **44**

30. $m∠ACD$ **44**

31. $m∠ACB$ **136**

32. $m∠ABC$ **22**

(figure with A, $92°$, D, C, B)

Find the value of each variable.

38. 24, $x^2 + 5x$ **3**

39. $(y^2 - 62)°$, $(2y - 5)°$ **14**

GAMES Use the diagram of a game timer shown to find each measure.

40. $m∠LPM$ **80**

41. $m∠LMP$ **80**

42. $m∠JLK$ **20**

43. $m∠JKL$ **80**

(figure with J, K, L, $(2x + 10)°$, Q, M, $(3x - 55)°$, P)