Pr 7.3

1. Vertical ∠'s ≅ along w/ given ≅ pair allow you to conclude Δ's ~ by AA~. ΔAXB ~ ΔRXQ

2. $\frac{9}{12}=\frac{12}{16}=\frac{15}{20}=\frac{3}{4}$
Corresponding sides are proportional, so Δ's ~ by SSS~.
ΔXPH ~ ΔAOL
(SAS~ also ok)

3. $\frac{4}{2}=\frac{8}{4}=\frac{2}{1}$
Vertical ∠'s ≅ and surrounding sides are proportional.
Δ's ~ by SAS~
ΔMQP ~ ΔMAB

4. m∠J + 20 + 30 = 180
m∠J + 50 = 180
m∠J = 130°
Since 2 ∠s of one Δ are ≅ to 2 ∠s of another Δ, Δ's ~ by AA~.
ΔMJN ~ ΔACB

5. $\frac{1}{11}=\frac{1}{11}$ (tic marks)
Vertical ∠'s ≅ + surrounding sides are proportional, Δ's ~ by SAS~.
ΔAXB ~ ΔRXC

6. $\frac{1}{11}=\frac{1}{11}=\frac{1}{11}$ (tic marks)
Corresponding sides are all proportional, so Δ's ~ by SSS~. Since both Δ's are equilateral, they can be named in ANY order. ΔABC ~ ΔXYZ

7. $\frac{5}{6}=\frac{x}{9}$; $x=\frac{15}{2}$

8. $\frac{8}{10}=\frac{11}{x}$; $x=\frac{55}{4}$

9. $\frac{12}{7}=\frac{x}{4}$; $x=\frac{48}{7}$

10. $\frac{17}{x}=\frac{12}{12+8}$; $x=\frac{85}{3}$

11. $\frac{4}{3}=\frac{4+x}{8}$; $x=\frac{20}{3}$

12. $\frac{x}{12}=\frac{42}{14}$; $x=36$

13. 33 feet tall

Pr 7.2

1. Yes, ΔLKM ~ ΔRQS
~ ratio = 5/3

2. Yes, ΔABC ~ ΔXYZ
~ ratio 10/7

3. Not ~; corresponding ∠'s not ≅

4. Not ~; corresponding sides not proportional

5. Yes, Rectangle LMPR ~ Rectangle QICK

6. Not ~, corresponding ∠'s not ≅

7. yes, 10/11

8. No, corresponding ∠'s not ≅

9. yes, corresponding ∠'s are ≅ (50°-130°-50°-(30°)
sides are proportional.
~ ratio $\frac{4}{9}$