5-2 Answer Key Chap: Quadrilaterals Day 2

p173

① Yes opp sides ≅

② Yes, 1 pr. opp sides ≅ & ∥

③ No

④ Yes, diag. bisect each other

⑤ NO

⑥ Yes, opp ∠s ≅

⑦ Yes, both prs sides ∥.

⑧ No

⑨ Yes, opp ∠s ∥.

⑫ Since $EF = Hg$ and $HE = GF$, EFGH is ▱ and $\overline{HG} \parallel \overline{EF}$.

⑬ The dashed lines shown bisect each other, so the quad formed by their endpoints is a ▱. The jaws are ∥ to 2 opp sides of the ▱.

p174

① Def of ▱ → opp sides ∥.

② opp sides ≅ (both prs)

③ 1 pr. sides ≅ & ∥

④ Diag. bisect each other

⑤ both prs opp ∠s ≅

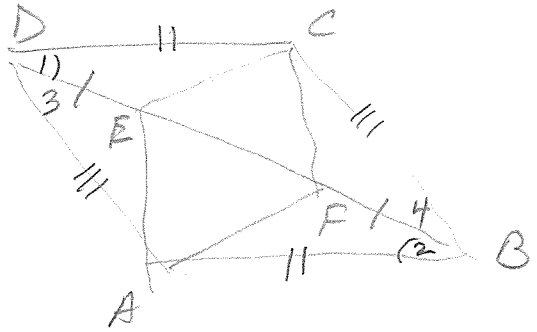
⑥ Answers vary.

⑦ The diag. bisect each other → ABDR is a ▱ → $\overline{AR} \parallel \overline{BD}$

⑧ Show 1 pr. opp sides ≅ & ∥.

p175

(17) Given: ▱ABCD, DE = BF
Prove: AFCE is a ▱



Show $\triangle ECD \cong \triangle FAB$ (SAS)
$\triangle AED \cong \triangle CFB$ (SAS)
$\overline{EC} \cong \overline{AF}$ (CPCTC)
$\overline{EA} \cong \overline{CF}$

① ▱ABCD → ② $\overline{DC} \parallel \overline{AB}$ → ③ $\angle 1 \cong \angle 2$
→ ④ $\overline{DC} \cong \overline{AB}$
⑤ $\overline{DE} \cong \overline{BF}$
} ⑥ $\triangle ECD \cong \triangle FAB$
→ ⑦ $\overline{EC} \cong \overline{AF}$

① ▱ABCD → ⑧ $\overline{DA} \parallel \overline{CB}$ → ⑨ $\angle 3 \cong \angle 4$
⑩ $\overline{DA} \cong \overline{CB}$
⑪ $\overline{DE} \cong \overline{BF}$
} ⑫ → $\triangle AED \cong \triangle CFB$
→ ⑬ $\overline{EA} \cong \overline{CF}$
} → ⑭ ▱AFCE

① Given
② ▱ → opp sides ∥
③ 2 ∥ lines → alt. int. ∠s ≅
④ ▱ → opp sides ≅
⑤ Given
⑥ SAS ≅ SAS
⑦ CPCTC

⑧ ▱ → opp sides ∥
⑨ 2 ∥ lines → alt. int ∠s ≅
⑩ ▱ → opp sides ≅
⑪ Given
⑫ SAS ≅ SAS

⑬ CPCTC
⑭ 2 prs. opp sides ≅ → ▱.

(19) $x = 18$
$y = 14$

$3y = 42$
$8x - 6 + 42 = 180$

(20) $x = 20$
$y = 6$ or $y = -5$

$3x - 40 = x$
$y^2 = y + 30$

(21) $x = 10$, $y = 2$

$3x - 2y = 26$
$4x + y = 42$

(22) $x = 11$, $y = 5$

$7y - 2 = 3x$
$9y = 4x + 1$