

BE- Geometry | | Wednesday 10-20-10

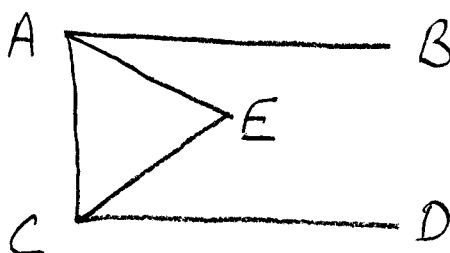
ACT
prep

① $-5|-3+7|=?$

② $6(x+2) > 7(x-5)$

③ WHAT IS THE SURFACE AREA
of a 5 inch cube?

④ IN THE figure below, $\overline{AB} \parallel \overline{CD}$, \overline{AE}
bisects $\angle BAC$ and \overline{CE} bisects $\angle ACD$.
If $m\angle BAC$ is 82° , what is $m\angle AEC$?



ANS

① $-5|4|$

$-5(4) = -20$

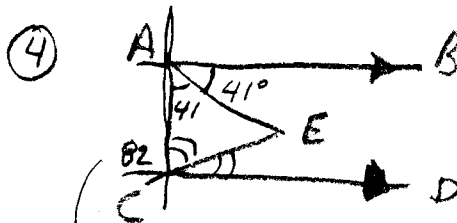
② $6x+12 > 7x-35$

$47 > x$

$x < 47$

③ $5^2 = 25$

$25 \cdot 6 = 150 \text{ in}^2$



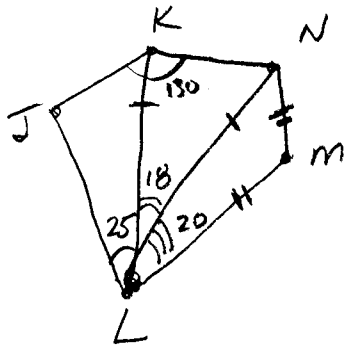
$m\angle ACD = 180 - 82 = 98$

$\therefore m\angle ACE = \frac{98}{2} = 49$

$\therefore m\angle AEC = 180 - (41 + 49) = 90^\circ$

Homework Review Pg 219 #15, 16, 19, 20
Pg 286 #28-30, 32, 34, 35

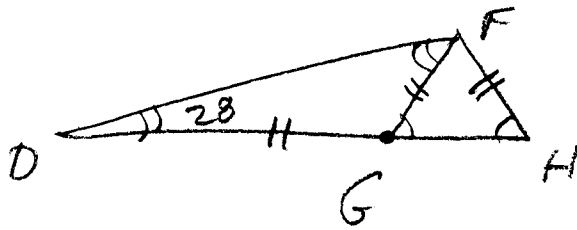
$\triangle KLN$ and $\triangle LMN$ are isosceles, $m\angle JKN = 130$



(15) $m\angle LNM = 20^\circ$ since $\overline{NM} \cong \overline{LM}$

(16) $m\angle M = 180 - 40 = 140^\circ = m\angle M$

$\triangle DFG$ and $\triangle FGH$ are isosceles
 $m\angle FDH = 28^\circ$ $\overline{DG} \cong \overline{FG}$



(19) $m\angle DFG \Rightarrow 28^\circ$ isos. \triangle 's

(20) $m\angle DGF \Rightarrow 180 - 2(28)$

$180 - 56$

$124^\circ = m\angle DGF$

Pg 286 # 28-30, 32, 34, 35.

$$\textcircled{28} \quad \frac{3}{8} = \frac{x}{5} \quad \therefore 8x = 15$$
$$\boxed{x = \frac{15}{8}}$$

$$\textcircled{29} \quad \frac{a}{5.18} = \frac{1}{4} \quad \therefore 4a = 5.18$$
$$a = \frac{5.18}{4} = \frac{2.59}{2}$$
$$\boxed{a = 1.295}$$

$$\textcircled{30} \quad \frac{3x}{23} = \frac{48}{92} \quad \therefore (3 \cdot 92)x = 23 \cdot 48$$
$$x = \frac{23 \cdot 48}{3 \cdot 92}$$
$$\boxed{x = 4}$$

$$\textcircled{32} \quad \frac{2x-13}{28} = \frac{-4}{7} \quad \therefore 14x - 91 = -112$$
$$+91 \quad +91$$
$$14x = -21$$
$$x = -\frac{21}{14}$$
$$\boxed{x = -\frac{3}{2}}$$

$$\textcircled{34} \quad \frac{b+1}{b-1} = \frac{5}{6} \quad \therefore 6b+6 = 5b-5$$

$$\boxed{b = -11}$$

$$\textcircled{35} \quad \frac{3x-1}{2} = \frac{-2}{x+2}$$

$$(3x-1)(x+2) = -4$$

$$3x^2 + 6x - 1x - 2 = -4$$

$$ +4 +4$$

$$3x^2 + 5x + 2 = 0$$

$$\begin{array}{l} \text{sum} = 5 \\ \text{prod} = 6 \\ \phantom{\text{prod}} \begin{array}{l} \\ \\ \\ \end{array} \end{array}$$

$$3x^2 + 2x + 3x + 2 = 0$$

$$x(3x+2) + 1(3x+2) = 0$$

$$(3x+2)(x+1) = 0 \quad \therefore \boxed{x = \left\{ -\frac{2}{3}, -1 \right\}}$$

$$\begin{array}{l} \text{CK} \\ x = -1 \end{array} \quad \frac{3(-1)-1}{2} \stackrel{?}{=} \frac{-2}{(-1)+2}$$

$$\frac{-4}{2} \stackrel{?}{=} \frac{-2}{1} \quad \checkmark$$

$$\begin{array}{l} \text{CK} \\ x = -\frac{2}{3} \end{array} \quad \frac{3\left(-\frac{2}{3}\right)-1}{2} = \frac{-2}{\left(-\frac{2}{3}\right) + \frac{6}{3}}$$

$$\frac{-2-1}{2} \stackrel{?}{=} \frac{-2}{\frac{4}{3}}$$

$$-\frac{3}{2} \stackrel{?}{=} -2 \cdot \frac{3}{4}$$

$$-\frac{3}{2} \stackrel{?}{=} -\frac{6}{4} \quad \checkmark$$

Practice - Q2 Week 2

Solve each proportion.

1) $\frac{5}{8} = \frac{7}{r}$

3) $\frac{10}{2} = \frac{2}{b-8}$

5) $\frac{4}{x-2} = \frac{9}{2}$

7) $\frac{n}{6} = \frac{n-6}{5}$

9) $\frac{x-3}{2} = \frac{x-7}{6}$

11) $\frac{n+3}{10} = \frac{n-1}{3}$

2) $\frac{10}{x} = \frac{9}{2}$

4) $\frac{8}{n-4} = \frac{6}{7}$

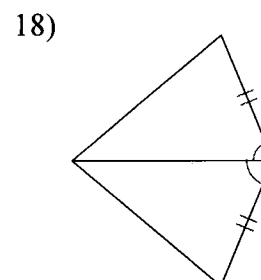
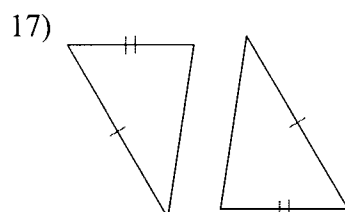
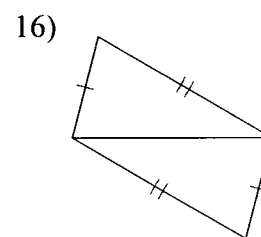
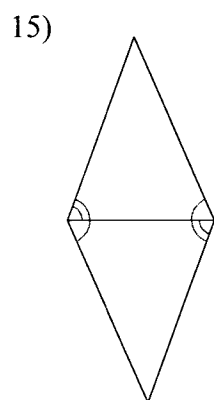
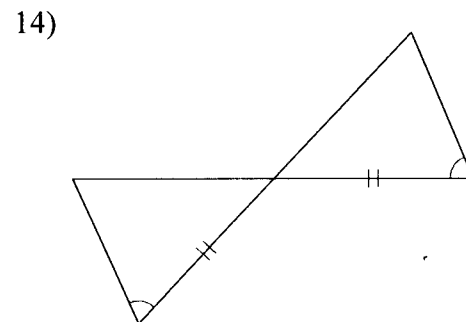
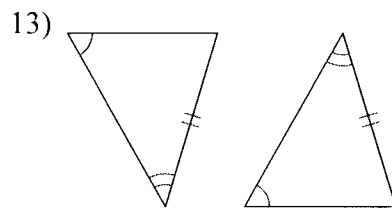
6) $\frac{8}{v+2} = \frac{2}{7}$

8) $\frac{2}{a+1} = \frac{3}{a}$

10) $\frac{9}{7} = \frac{v+3}{v-6}$

12) $\frac{5}{x+6} = \frac{8}{x-7}$

State if the two triangles are congruent. If they are, state how you know.



Answers to Practice - Q2 Week 2 (ID: 1)

1) $\left\{\frac{56}{5}\right\}$

2) $\left\{\frac{20}{9}\right\}$

3) $\left\{\frac{42}{5}\right\}$

4) $\left\{\frac{40}{3}\right\}$

5) $\left\{\frac{26}{9}\right\}$

6) $\{26\}$

7) $\{36\}$

8) $\{-3\}$

9) $\{1\}$

10) $\left\{\frac{75}{2}\right\}$

11) $\left\{\frac{19}{7}\right\}$

12) $\left\{-\frac{83}{3}\right\}$

13) AAS

14) ASA

15) ASA

16) SSS

17) Not congruent

18) SAS