

BE-Precalc TUESDAY 10-6-09

ACT ① A RECTANGLE has an area of 32 square feet and a perimeter of 24 feet.

What is the SHORTEST of the side lengths, in feet, of the rectangle?

② In the school cafeteria, students choose their lunch from 3 sandwiches, 3 soups, 4 salads, and 2 drinks. How many different lunches are possible for a student whose choices exactly 1 sandwich, 1 soup, 1 salad, and 1 drink?

ANS

$$\textcircled{1} \quad lw = 32 \therefore l = \left(\frac{32}{w}\right)$$

$$2l + 2w = 24$$

$$2\left(\frac{32}{w}\right) + 2w = 24$$

$$w \left[\frac{64}{w} + 2w \right] = 24 \cdot w$$

$$64 + 2w^2 = 24w$$

$$2w^2 - 24w + 64 = 0$$

$$2(w^2 - 12w + 32) = 0$$

$$S \Rightarrow -12$$

$$P \Rightarrow 32$$

$$-4 \quad -8$$

$$\therefore 2(w-4)(w-8) = 0$$

$$\boxed{w=4} \quad w=8$$

SHORTEST

② FUNDAMENTAL Counting Principle

$$3 \cdot 3 \cdot 4 \cdot 2$$

$$= \boxed{72}$$

Precalc - Homework Review Pg 254-255
#4-6, 12-14

④ $(\sqrt{1-4t})^2 = (2)^2$ $\left\{ \begin{array}{l} \underline{\text{CK}} \\ t = -\frac{3}{4} \end{array} \right.$ $\sqrt{1-4(-\frac{3}{4})} \stackrel{?}{=} 2$
 $1-4t = 4$
 $-4t = 3$
 $t = -\frac{3}{4}$
 $\sqrt{1+3} \stackrel{?}{=} 2 \checkmark$
 $t = -\frac{3}{4}$

⑤ $\sqrt[3]{x+4} + 12 = 3$ $\left\{ \begin{array}{l} \underline{\text{CK}} \\ \sqrt[3]{(-733)+4} + 12 \stackrel{?}{=} 3 \end{array} \right.$
 $(\sqrt[3]{x+4})^3 = (-9)^3$
 $x+4 = -729$ $\left\{ \begin{array}{l} 81 \\ \times 9 \\ \hline 729 \end{array} \right.$
 $x = -733$
 $\sqrt[3]{-729+12} \stackrel{?}{=} 3$
 $-9 + 12 \stackrel{?}{=} 3 \checkmark$

$x = -733$

⑥ $5 + \sqrt{x-4} = 2$ $\left\{ \begin{array}{l} \underline{\text{CK}} \\ 5 + \sqrt{(13)-4} \stackrel{?}{=} 2 \end{array} \right.$
 $(\sqrt{x-4})^2 = (-3)^2$
 $x-4 = 9$
 $x = 13$
 $5 + \sqrt{9} \stackrel{?}{=} 2$
 $5 + 3 \stackrel{?}{=} 2 \text{ False}$
 NO SOLUTION

$$(12) \quad (\sqrt{x+8})^2 = (5)^2$$

$$x+8 = 25$$

$$x = 17$$

$$\underline{\underline{CK}} \quad \sqrt{(17)+8} \stackrel{?}{=} 5 \checkmark$$

$$x = 17$$

$$(13) \quad (\sqrt[3]{y-7}) = (4)$$

$$y-7 = 64$$

$$y = 71$$

$$\underline{\underline{CK}} \quad \sqrt[3]{(71)-7} \stackrel{?}{=} 4$$

$$\sqrt[3]{64} = 4 \checkmark$$

$$x = 71$$

$$(14) \quad \sqrt{8N-5} - 1 = 2$$

$$(\sqrt{8N-5})^2 = (3)^2$$

$$8N-5 = 9$$

$$8N = 14$$

$$N = \frac{14}{8} = \frac{7}{4}$$

$$\underline{\underline{CK}} \quad \sqrt{8\left(\frac{7}{4}\right)-5} - 1 \stackrel{?}{=} 2$$

$$\sqrt{14-5} - 1 \stackrel{?}{=} 2$$

$$\sqrt{9} - 1 \stackrel{?}{=} 2 \checkmark$$

$$x = \frac{7}{4}$$

No New MATERIAL Before EXAM 2

Homework / Classwork:

- Pg. A32 Lesson 4-2 # 7-12
- Also, solve # 7, 11 Above by factoring.
- Pg A28 Lesson 2-1 # 4, 5
- Pg A29 Lesson 2-5 # 1, 2, 4
- Pg A26 Lesson 1-4 # 5
- Pg A27 Lesson 1-5 # 2, 5
(write in SI Form and Standard Form)

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- Pg A26 Lesson 1-2 # 2
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