

Geometry 1 - BE WEDNESDAY 3-16-11

ACT
PRACTICE

- ① WHAT IS THE y -intercept of the line in the standard (x, y) coordinate plane that goes through the points $(-3, 6)$, $(3, 2)$.
 - ② The depth of a pond is 180 cm and is being reduced by 1 cm per week. The depth of the second pond is 160 cm and is being reduced by $\frac{1}{2}$ cm per week. If this continues, how many weeks before the ponds have the same depth?
 - ③ WHAT IS THE SLOPE of any line parallel to $7x + 9y = 6$?
 - ④ If 12 vases cost \$18.00, WHAT IS THE COST OF 1 VASE?
-

• Homework Review

$$\textcircled{1} \quad (-3, 6), (3, 2) \quad m = \frac{2-6}{3-(-3)} = \frac{-4}{6} = \left(-\frac{2}{3} = m\right)$$

x, y

$$y = mx + b$$

$$2 = -\frac{2}{3} \cdot 3 + b$$

$$\boxed{4 = b}$$

$$\textcircled{2} \quad d = -1 \frac{\text{cm}}{\text{wk}} W + 180$$

$$d = -1W + 180$$

$$d = -\frac{1}{2}W + 160$$

$$-W + 180 = -\frac{1}{2}W + 160$$

$$20 = \frac{1}{2}W \quad \therefore \boxed{W = 40 \text{ weeks}}$$

$$\textcircled{3} \quad 7x + 9y = 6 \quad m = m_{\perp} = ?$$

$$9y = -7x + 6$$

$$y = -\frac{7}{9}x + \frac{2}{3}$$

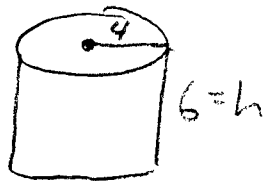
$$\therefore \boxed{m_{\perp} = -\frac{7}{9}}$$

$$\textcircled{4} \quad \frac{\$18.00}{12 \text{ vases}} = \frac{3}{2} \frac{\$}{\text{vases}} = \boxed{\$1.50 \text{ per vase}}$$

Geometry 1 HW Review - Pg 657 # 4-7

④ $S = ?$ $S = \text{surface area}$

Cylinder, $r = 4\text{ft}$ $h = 6\text{ft}$. Nearest tenth.



$$\text{Bases} \Rightarrow 2 \cdot \pi r^2 = 2\pi(4)^2 \\ = 32\pi$$

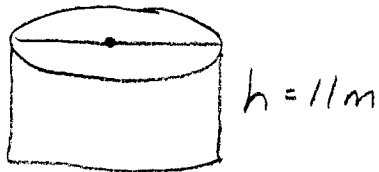
$$L = (2\pi r)h = 2\pi(4)(6) = 48\pi$$

$$\therefore S = 32\pi + 48\pi = 80\pi \approx 251.327$$

$$S \approx 251.3 \text{ ft}^2$$

⑤ $S = ?$

$$\text{dia} = 22\text{m} \therefore r = 11\text{m}$$



$$\text{Bases} = 2 \cdot \pi r^2 \\ = 2 \cdot \pi(11)^2 \\ = 242\pi$$

$$L = (2\pi r)h \\ = 2\pi(11)(11) = 242\pi$$

$$\therefore S = 242\pi + 242\pi = 484\pi \text{ m}^2$$

$$S \approx 1520.531$$

$$S \approx 1520.5 \text{ m}^2$$

⑥ Find r $S = 96\pi \text{ cm}^2$ $h = 8\text{cm}$
(cylinder)

$$S = \underbrace{2(\pi r^2)}_{\text{BASES}} + \underbrace{(2\pi r)h}_{\text{Lateral Area}}$$

$$96\pi = 2\pi r^2 + 2\pi r \cdot 8$$

$$\frac{96\pi}{2\pi} = \frac{2\pi r^2}{2\pi} + \frac{16\pi r}{2\pi}$$

$$48 = r^2 + 8r$$

$$\therefore r^2 + 8r - 48 = 0$$

$$\text{Sum} = 8$$

$$\text{prod} = -48$$

$$\begin{array}{c} \nearrow \searrow \\ -4 \quad +12 \end{array}$$

$$(r-4)(r+12) = 0 \quad \therefore r = 4\text{cm}$$

{DISCARD $r = -12$ }

⑦ $S = 140\pi \text{ ft}^2$, $h = 9\text{ ft}$, cylinder, $r = ?$

$$\frac{140\pi}{2\pi} = \frac{2\pi r^2}{2\pi} + \frac{18\pi r}{2\pi}$$

$$r^2 + 9r - 70 = 0$$

$$\text{Sum} = 9$$

$$\text{prod} = -70$$

$$\begin{array}{c} \nearrow \searrow \\ -5 \quad +14 \end{array}$$

$$(r-5)(r+14) = 0 \quad \therefore \boxed{r = 5\text{ ft}}$$

{DISCARD $r = -14$ }

PRACTICE:

Pg. 657 # 9, 12, 17, 18, 19

FIND THE S.A. of cylinder:

⑨ $r = 13\text{ m}$, $h = 15.8\text{ m}$

⑫ $r = 14\text{ mm}$, $h = 14\text{ mm}$

FIND THE RADIUS OF THE base of EACH cylinder.

⑰ $S = 48\pi\text{ cm}^2$, $h = 5\text{ cm}$

⑱ $S = 340\pi\text{ in}^2$, $h = 7\text{ in}$

⑲ $S = 320\pi\text{ m}^2$, $h = 12\text{ m}$.
