Algebra 2 | Monday 4-8-13 | Class Notes

WS ② $P = \frac{KQ}{R}$ (9 over P, 3 over Q, 4 under R)

$9 = \frac{K \cdot 3}{4}$ $\therefore$ $36 = K3$ $\quad K = 12$

$P = \frac{12Q}{R}$ (? over P) Eq. of variation

1 under P, 0.5 under R

$1 = \frac{12 \cdot Q}{\frac{1}{2}}$ $\therefore$ $1 = 24Q$

$Q = \frac{1}{24}$

(8) Area of $\triangle$ varies jointly as the base, b and height, h.
$A = 12m^2$ when $b = 6m$ and $h = 4m$.

Find b when $A = 36m^2$ and $h = 8m$

$A = kbh$

$12 = k(6)(4)$

$k = \frac{1}{2}$

$A = \frac{1}{2}bh$

$36 = \frac{1}{2}b(8)$

$9 = b$ meters

(9) Circle: Center $(-5, 1)$, $r = 12$

$$(x+5)^2 + (y-1)^2 = 144$$

(11) Common Ratio: $4, 24, 144, 864, \ldots$

$$6$$

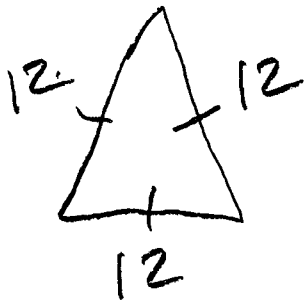
(12) Common Difference: $-29, 171, 371, 571 \ldots$

(13) $$\frac{1}{m+1} \cdot \frac{2m+20}{m+10}$$

$$\frac{1}{m+1} \cdot \frac{2(m+10)}{(m+10)}$$

$$= \frac{2}{m+1} \qquad m \neq -1, -10$$

(EX)



Area using Heron's Formula

$P = 36$

$s = 18$

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

$$A = \sqrt{18(6)(6)(6)}$$

$$A = \sqrt{3 \cdot 6^4}$$

$$\boxed{A = 6^2\sqrt{3} = 36\sqrt{3}} \text{ units}^2$$

(15) $\dfrac{x+1}{6x^2} \cdot \dfrac{6x^2}{5x^2-35x}$

$\dfrac{x+1}{5x(x-7)}$

$x \neq 0$
$x \neq 7$

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(21) $\dfrac{N-4}{20} \div \dfrac{N-4}{10}$

$\dfrac{\frac{N-4}{20}}{\frac{N-4}{10}}$

$\dfrac{N-4}{20} \cdot \dfrac{10}{N-4} = \dfrac{1}{2}$ $\{N \neq 4$
