

Ch 3

① quote of Proclus (p 50)

③



$$\frac{a+b}{a} = \frac{a}{b}$$

golden ratio

$$\frac{a+b}{a} = \frac{a}{b} = X$$
$$a = bX$$

$$\frac{bX+b}{bX} = \frac{bX}{b}$$

$$\frac{X+1}{X} = X$$

$$X+1 = X^2$$

$$X^2 - X = 1$$

$$\left(X - \frac{1}{2}\right)^2 = \frac{5}{4}$$

$$X = \frac{1}{2} \pm \frac{\sqrt{5}}{2}$$

4) Data $V - E + F = 2$

5) Theaetetus

	V	E	F
- tetrahedron	4	6	4
- cube	8	12	6
- octahedron	6	12	8
- truncated dodecahedron	20	30	12
- icosahedron	12	30	20

(~7E)

- 7) . no contact
 - . no 1st mill. BCE Babylonian math
- 8) quadratic formula

$$\gcd(963, 657) = \gcd(657, 276) = \gcd(276, 105) =$$
$$\rightarrow \gcd(105, 66) = 3$$

$$(963, 657) = (306, 657)$$

$$= (306, 45)$$

$$= (36, 45) = (36, 9)$$

$$= 9$$