

# 第5讲

例1:  $15 \times 6000000 = 90000000 \text{ 厘米} = 90 \text{ 千米}$

时-时:  $10 \times 60000000 = 600000000 \text{ 厘米} = 600 \text{ 千米}$   $60 \div 6 = 100 \text{ 千米/时}$   $10 \div (11+9) \times 6 \times 11 = 330 \text{ 千米}$

例2:  $\frac{1}{4}, \frac{1}{8}, 3:1$ , 时-时: 4倍, 16倍, 64倍.

例3: 直径:  $2 \div \frac{1}{20} = 40 \text{ 厘米} = 4 \text{ 米}$

①  $S: 3.14 \times (4 \div 2)^2 = 12.56 \text{ 平方米}$

②  $r: 4 \div 2 = 2 \text{ 米}$   $3.14 \times (2+1)^2 - 3.14 \times 2^2 = 15.7 \text{ 平方米}$

时-时:  $d_{\text{大}}:d_{\text{中}}:d_{\text{小}} = 1:3:5$

$S_{\text{大半}}:S_{\text{中半}}:S_{\text{小半}} = 1:9:25$   $A: (9-1) \div 3 = \frac{8}{3}$   $B: (25-9) \div 5 = \frac{16}{5}$   $A:B = 5:6$

例4:  $\triangle DHC$  与  $\triangle DAB$  相似

$CD:BD = HC:AB = 2:(3+2)$

$HC: 3 \times \frac{2}{5} = \frac{6}{5} = 1.2$

时-时:  $\triangle DCF$  与  $\triangle EBF$  相似

$DC:EB = FC:FB = 4:1$

$FC: 10 \div (4+1) \times 4 = 8$

例5:  $\triangle DCG$  与  $\triangle DBA$  相似

$DC:DB = CG:AB = 4:(4+5) = 4:9$

$CG = 5 \times \frac{4}{9} = \frac{20}{9} \text{ 厘米}$   $FC = 4 - \frac{20}{9} = \frac{16}{9} \text{ 厘米}$

$S_{\text{阴}}: \frac{16}{9} \times 4 \div 2 = \frac{32}{9} \text{ 平方厘米}$

时-时:  $\triangle BEF$  和  $\triangle DAF$  相似

$BE:AD = 1:2$

$S_{\triangle BEF}:S_{\triangle DAF} = 1^2:2^2 = 1:4$

$S_{\triangle DAF} = 4 \div \frac{1}{4} = 16 \text{ 平方厘米}$

$\triangle ABF$  与  $\triangle DEF$  是蝴蝶模型

$16 \times 4 = 64 = 8 \times 8$

$S_{\triangle ABF} = S_{\triangle DEF} = 8 \text{ 平方厘米}$

$S_{\triangle ABD} = 8 + 16 = 24 \text{ 平方厘米}$

$S_{\text{四边形}}: 24 \times 2 = 48 \text{ 平方厘米}$

例6:  $h_{\text{甲}}:h_{\text{乙}} = 2:1$   $d_{\text{乙}}:d_{\text{甲}} = 2:1$

$S_{\text{乙}}:S_{\text{甲}} = 4:1$   $V_{\text{乙}}:V_{\text{甲}} = (4 \times 1):(1 \times 2) = 2:1$

$V_{\text{乙}} = 2V_{\text{甲}}$   $B > A$  乙桶容积大

时-时:  $C_{\text{原}}:C_{\text{现}} = 4:3$   $V_{\text{原}}:V_{\text{现}} = 4:3$   $S_{\text{原}}:S_{\text{现}} = 16:9$

$V_{\text{原}}:V_{\text{现}} = 1:(4 \times \frac{3}{4}) = 3:4$   $h_{\text{原}}: 3 \div 16 = \frac{3}{16}$   $h_{\text{现}} 4 \div \frac{4}{9} = \frac{9}{4}$

$h_{\text{现}}:h_{\text{原}} = \frac{9}{4} \div \frac{3}{16} = 64:27$

智慧角41年:  $V_A:V_B = 6:8 = 3:4$

$S_A:S_B = 9:16$

$h_A:h_B = 1:1$

$V_A:V_B = 9:16$

容器中水深:  $9 \div 16 = \frac{9}{16}$

$2 \div (\frac{7}{8} - \frac{9}{16}) = 6.4 \text{ 厘米}$

智慧磨炼:

1.  $b \div \frac{1}{7200} = 7200 \text{ 千克}$   $7200 + 6 = 7206 \text{ 千克}$

2.  $C_{\text{大}}: 3.14 \times 1 \times 2 = 6.28 \text{ 厘米}$

$C_{\text{小}}:C_{\text{大}} = 1:3$   $C_{\text{大}}: 6.28 \times 3 = 18.84 \text{ 厘米}$

$18.84 + 6.28 \times 7 = 62.8 \text{ 厘米}$



智慧火焰

3.  $V_{小}:V_{大}=8:27$

$h_{小}:h=2:3$

$2:3=\frac{2}{3}$

4.  $V_{大}:V_{中}:V_{小}=2:1.5:0.5=4:3:2$

$S_{大}:S_{中}:S_{小}=16:9:1$   $16 \div 2 = 8$ 份  $9 \div 2 = 4.5$ 份  $1 \div 2 = 0.5$ 份

$S_{中}: 8 - 4.5 + 1 + 0.5 = 5$ 份  $S_{空}: 16 - 5 = 11$ 份

$S_{中}:S_{空}=5:11$

5.  $\triangle EDF$ 与 $\triangle ECB$ 相似

$ED:EC = DF:CB = (20-8):20 = 3:5$

$DF = 8 \times \frac{3}{5} = 4.8$  厘米

$S_{梯}: (4.8 + 8) \times 8 \div 2 = 51.2$  平方厘米