Homework2

**实验三**

**基础练习**

第一题：

#include<stdio.h>

int main(void){

int num1, num2, num3;

scanf("%d %d %d", &num1,&num2, &num3);

if(num1 > num2 && num1>num3){

printf("%d",num1);

}else if(num2 > num1 && num2>num3){

printf("%d",num2);

}else if(num3 > num2 && num3 > num1){

printf("%d",num3);

}

return 0;

}

第二题

#include<stdio.h>

int main(void){

int num1, num2, num3;

scanf("%d %d %d", &num1,&num2, &num3);

if(num1 < num2 && num1<num3){

printf("%d",num1);

}else if(num2 < num1 && num2<num3){

printf("%d",num2);

}else if(num3 < num2 && num3 < num1){

printf("%d",num3);

}

return 0;

}

第三题

#include<stdio.h>

#include <math.h>

int main(void){

int a, b, c;

scanf("%d %d %d", &a, &b, &c);

printf("%dx^2 + %dx + %d = 0\n",a,b,c);

float dis = pow(b, 2) - 4.0\*a\*c;

if(dis > 0){

float result1,result2;

result1 = (-b + sqrt(dis)) / 2.0\*a;

result2 = (-b - sqrt(dis)) / 2.0\*a;

printf("%f, %f", result1,result2);

}else if(dis == 0){

float result = (-b) /2.0\*a;

printf("%f", result);

}else{

printf("无实根");

}

return 0;

}

第四题

#include<stdio.h>

int main(void){

int score;

scanf("%d", &score);

if(score >= 90){

printf("A");

}else if(score >= 80 && score <=89){

printf("B");

}else if(score >= 70 && score <= 79){

printf("C");

}else if(score >= 60 && score <= 69){

printf("D");

}

return 0;

}

第五题

#include<stdio.h>

int main(void){

int num1, num2, num3;

scanf("%d %d %d", &num1,&num2,&num3);

int temp = 0;

if(num1> num2 ){

temp = num1;

num1 = num2;

num2 = temp;

}

if(num2 > num3){

temp = num2;

num2 = num3;

num3 = temp;

}if(num1> num2 ){

temp = num1;

num1 = num2;

num2 = temp;

}

printf("%d ,%d, %d", num1,num2,num3);

return 0;

}

第六题

#include<stdio.h>

int main(void){

int number;

scanf("%d", &number);

if(number % 2 == 0 && number % 3 == 0 && number % 5 == 0){

printf("It can be divide by 2,3,5");

}else {

printf("It can't be divide by 2,3,5");

}

return 0;

}

第七题

#include<stdio.h>

int main(void){

int a, b ,c;

printf("请按从小到大输入三角形的三边\n");

scanf("%d %d %d", &a, &b, &c);

if(a + b > c){

printf("yes");

if (a \* a + b \* b == c \* c){

printf("是直角三角形\n");

if(a == b){

printf("是等腰三角形\n");

}

}

}else {

printf("不能组成三角形\n");

}

return 0;

}

第八题

#include<stdio.h>

int main(void){

int num;

scanf("%d", &num);

if (num % 2 == 0){

printf("是偶数");

}else {

printf("是奇数");

}

return 0;

}

第九题

#include<stdio.h>

int main(void){

int price;

scanf("%d", &price);

int tax = 0;

if(price >= 10000){

tax = price \* 0.05;

}else if(price >= 5000 && price <10000){

tax = price \* 0.03;

}else if(price >= 1000 && price < 5000){

tax = price \* 0.02;

}else if (price < 1000){

tax = 0;

}

printf("tax = %d", tax);

return 0;

}

第十题

#include<stdio.h>

int main(void){

int num;

scanf("%d", &num);

switch(num){

case 91:

printf("30");

break;

case 92:

printf("32");

break;

case 93:

printf("30");

break;

case 94:

printf("30");

break;

case 95:

printf("32");

break;

}

return 0;

}

进阶练习

第一题

#include<stdio.h>

int main(void){

int x, y;

scanf("%d", &x);

if(x < 1){

y = x;

}else if(x>=1 && x < 15){

y = 2\*x - 1;

}else if(x >= 15){

y = 6 \* x + x \* x;

}

printf("%d", y);

return 0;

}

第二题

#include<stdio.h>

#include <math.h>

int main(void){

int x, y;

double z;

scanf("%d %d", &x, &y);

if(x > 0 && y > 0){

z = log(x) + log(y);

}else if(x < 0 && y > 0){

z = sin(x) + sin(y);

}else if(x < 0 && y < 0){

z = exp(2 \* x) + exp(3 \* x);

}else if(x > 0 && y < 0){

z = sin(x + y) / cos(x + y);

}

printf("%lf", z);

return 0;

}

第三题

#include<stdio.h>

int main(void){

int x;

scanf("%d", &x);

printf("请输入不多于五位的正整数:\n");//输入整数

int y = x; //保留x

int post = 0;//定义一个变量储存位数

for(int i = 1; i <= 5; i++){

y = y / 10;

post++;

if(y==0){

break;

}

}

printf("这是%d 位数\n",post);

//逆序输出数字

int result = 0;

while(x != 0){

result = result \* 10 + x % 10;

//取最后一位数

x /= 10;

//抛弃最后一位数，位数减一

}

printf("%d\n", result);

return 0;

}

第四题

#include<stdio.h>

int main(void){

int num1,num2;

scanf("%d %d", &num1,&num2);

if(num2 == 0){

printf("余数不能为零\n");

}else{

float quotient = 1.0 \* num1 / num2;

int remainder = num1 % num2;

printf("商数为%f, 余数为%d\n",quotient,remainder );

}

return 0;

}

第五题

//一年的第几天：

//一月31天，二月28天，三月31，四月30，五月31，六月30，七月31，八月31

//九月30，十月31，十一月30，十二月31

//1.判断平闰年

//2.倒叙判断

#include<stdio.h>

int main(void){

int year, month, day;

printf("请输入年月日\n");

scanf("%d %d %d",&year,&month, &day);

int days = 0;

switch(month){

case 12:

days += 30;

case 11:

days += 31;

case 10:

days += 30;

case 9:

days += 31;

case 8:

days += 31;

case 7:

days += 30;

case 6:

days += 31;

case 5:

days += 30;

case 4:

days += 31;

case 3:

days += 28;

case 2:

days += 31;

case 1:

days += day;

}

if((year%4==0 && year%100!=0 || year%400==0) && month>=3){

//判断是不是闰年，月份有没有大于三月

days++;

}

printf("%d", days);

return 0;

}

第六题

#include<stdio.h>

int main(void){

int a, b ,c;

printf("请按从小到大输入三角形的三边\n");

scanf("%d %d %d", &a, &b, &c);

if(a + b > c){

printf("yes");

if (a \* a + b \* b == c \* c){

printf("是直角三角形\n");

if(a == b){

printf("是等腰三角形\n");

}

}

}else {

printf("不能组成三角形\n");

}

return 0;

}

第七题

#include<stdio.h>

int main(void){

int x, y,option;

scanf("%d %d", &x,&y);

printf("请输入选择：\n");

scanf("%d", &option);

float result;

switch(option){

case 1:

printf("做加法\n");

result = x + y;

break;

case 2:

printf("做减法\n");

result = x - y;

break;

case 3:

printf("做乘法\n");

result = x \* y \* 1.0;

break;

case 4:

printf("做除法\n");

result = x / y \* 1.0;

break;

}

printf("%f",result);

return 0;

}

4.3

­基础练习

第一题

#include<stdio.h>

int main(void){

int a, k;

scanf("%d", &a);

if(a > 0){

printf("%d:",a);

for(k = 1; k <= a; k++){

if(a % k == 0){

printf("%d",k);

}

}

}

printf("\n");

return 0;

}

第二题

#include<stdio.h>

int main(void) {

int arr[10];

for (int i = 0; i < 10; i++) {

int a;

printf("ÇëÊäÈëÊý×Ö£º\n");

scanf("%d", &a);

arr[i] = a;

}

int max = arr[0];

for (int j = 0; j < 10; j++) {

if (arr[j] < arr[j + 1]) {

max = arr[j + 1];

}

}

printf("%d", max);

return 0;

}

第三题

#include<stdio.h>

int main(void) {

for (int i = 1; i <= 9; i++) {

for (int j = 0; j <= 9; j++) {

for (int k = 0; k <= 9; k++) {

if (i \* i \* i + j \* j \* j + k \* k \* k == i \* 100 + j \* 10 + k) {

printf("%d\n", i \* 100 + j \* 10 + k);

}

}

}

}

}

第四题

#include<stdio.h>

#include <math.h>

int fac(int num1);

int main(void) {

double sinx = 0.0;//结果

double x;

scanf("%lf", &x);//对x赋值

double a = 0, b = 0;

for (int n = 1; ; n++) {

a = pow(x, 2 \* n - 1); //x 的次方

b = fac(2 \* n - 1); //阶乘

if (n % 2 == 0) {//奇数正，偶数负

sinx -= 1.0 \* a / b;

}

else {

sinx += 1.0 \* a / b;

}

if (a / b < 1e-5) {

break;

}

}

printf("%lf", sinx);

return 0;

}

int fac(int num1) {//阶乘

int sum = 1;

for (int i = 1; i <= num1; i++) {

sum \*= i;

}

return sum;

}

第五题

#include<stdio.h>

int main(void){

for(int i = 1; i <= 9; i++){

for(int j = 1; j <= 9; j++){

if(j < i){

printf("\t");

}else{

printf("%d\*%d=%d\t",i,j,i\*j);

}

}

printf("\n");

}

return 0;

}