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>> bisection_method
Bisection Method
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Q1a:
```

```
f(x) = x^3 - 9
n = 24
r = 2.0800838172
Forward error: 0.0000000058
Backward error: 0.0000000754
```

```
Q1b:
```

```
f(x) = 3x^3 + x^2 - x - 5
n = 24
r = 1.1697262228
Forward error: 0.0000000029
Backward error: 0.0000000396
```

```
Q1c:
```

```
f(x) = cos^2(x) - x + 6
n = 24
r = 6.7760923207
Forward error: 0.0000000044
Backward error: 0.0000000080
```

```
Q3a:
```

```
f(x) = 2x^3 - 6x - 1

a, b = -2, -1
n = 24
r1 = -1.6417835057
Forward error: 0.0000000218
Backward error: 0.0000002215
```

```
a, b = -1, 0
n = 24
r2 = -0.1682544053
Forward error: 0.0000000035
Backward error: 0.0000000203
```

```
a, b = 1, 2
n = 24
r3 = 1.8100379407
Forward error: 0.0000000115
Backward error: 0.0000001572
```

```
Q3b:
```

```
f(x) = e^(x-2) + x^3 - x

a, b = -2, -1
n = 24
r1 = -1.0234821737
Forward error: 0.0000000212
Backward error: 0.0000000464
```

```
a, b = -0.5, -0.5
n = 24
r2 = 0.1638222635
Forward error: 0.0000000202
Backward error: 0.0000000154
```

```
a, b = 0.5, 1.5
n = 24
r3 = 0.7889414132
Forward error: 0.0000000241
Backward error: 0.0000000281
```

```
Q3c:
```

```
f(x) = 1 + 5x - 6x^3 - e^(2x)
```

```
a, b = -1.5, -0.5
n = 24
r1 = -0.8180937469
Forward error: 0.0000000124
Backward error: 0.0000000924
```

```
a, b = -0.6, 0.4
n = 24
r2 = -0.0000000060
Forward error: 0.0000000060
Backward error: 0.0000000179
```

```
a, b = 0.5, 1.5
n = 24
r3 = 0.5063082874
Forward error: 0.0000000010
Backward error: 0.0000000053
```

Q4a:

```
f(x) = x^2 - A
A = 2, (a, b) = (1, 2)
n = 24
r = 1.4142135680
Forward error: 0.0000000056
Backward error: 0.0000000158
```

Q4b:

```
A = 3, (a, b) = (1, 2)
n = 24
r = 1.7320508063
Forward error: 0.0000000013
Backward error: 0.0000000045
```

Q4c:

```
A = 5, (a, b) = (2, 3)
n = 24
r = 2.2360679805
Forward error: 0.0000000030
Backward error: 0.0000000135
```

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