(e) $(231.78)_{10} = (?)_3$

```
3 |231
3 | 77    0
3 | 25    2
3 |  8    1
3 |  2    2
      0    2
```

```
   .78
  x 3
 2.34
  x 3
 1.02
  x 3
 0.06
  x 3
 0.18
```

$=(22120.2100\ldots)_3$

(f) $(1023.25)_{10} = (?)_3$

```
3 |1023
3 | 341    0
3 | 113    2
3 |  37    2
3 |  12    1
3 |   4    0
3 |   1    1
       0    1
```

```
   .25
  x 3
 0.75
  x 3
 2.25   *repeats
```

$=(1101220.\overline{02})_3$

(2) Base 5

(a) $(245)_{10} = (?)_5$

```
5 |245
5 | 49    0
5 |  9    4
5 |  1    4
      0    1
```

$=(1440)_5$

(b) $(461)_{10} = (?)_5$

```
5 |461
5 | 92    1
5 | 18    2
5 |  3    3
      0    3
```

$=(3321)_5$

(c) $(76.5)_{10} = (?)_5$

```
5 |76
5 |15    1
5 | 3    0
     0    3
```

```
   .5
  x 5
 2.5   *repeats
```

$=(301.\overline{2})_5$

(d) $(46.45)_{10} = (?)_5$

```
5 |46
5 | 9    1
5 | 1    4
     0    1
```

```
   .45
  x 5
 2.25
  x 5
 1.25   *repeats
```

$=(141.2\overline{1})_5$

(e) $(231.78)_{10} = (?)_5$

```
5 |231
5 | 46    1
5 |  9    1
5 |  1    4
      0    1
```

```
   .78
  x 5
 3.90
  x 5
 4.50
  x 5
 2.50   *repeats
```

$=(1411.34\overline{2})_5$

(f) $(1023.25)_{10} = (?)_5$

```
5 |1023
5 | 204    3
5 |  40    4
5 |   8    0
5 |   1    3
       0    1
```

```
   .25
  x 5
 1.25   *repeats
```

$=(13043.\overline{1})_5$

(3) Base 8

(a) $(245)_{10} = (?)_8$

```
8 |245
8 | 30    5
8 |  3    6
      0    3
```

$=(365)_8$

(b) $(461)_{10} = (?)_8$

```
8 |461
8 | 57    5
8 |  7    1
      0    7
```

$=(715)_8$