(a) $(76.5)_{10} = (?)_8$

```
8 |76
8 | 9    4
8 | 1    1
  | 0    1
```
```
    .5
  x  8
  4.0
```
$=(114.4)_8$

(d) $(46.45)_{10} = (?)_8$

```
8 |46
8 | 5    6
  | 0    5
```
```
   .45
  x  8
  3.60
  x  8
  4.80
  x  8
  6.4
  x  8
  3.2
  x  8
  1.6
  x  8
```
$=(56.34\overline{631})_8$ *repeats

(e) $(231.78)_{10} = (?)_8$

```
8 |231
8 | 28    7
8 |  3    4
  |  0    3
```
```
   .78
  x  8
  6.24
  x  8
  1.92
  x  8
  7.36
  x  8
  2.88
```
$=(347.6172...)_8$

(f) $(1023.25)_{10} = (?)_8$

```
8 |1023
8 | 127    7
8 |  15    7
8 |   1    7
  |   0    1
```
```
   .25
  x  8
  2.00
```
$=(1777.2)_8$

(4) Base 16

(a) $(245)_{10} = (?)_{16}$

```
16 |245
16 | 15    5 = 5
   |  0   15 = F
```
$=(F5)_{16}$

(b) $(461)_{10} = (?)_{16}$

```
16 |461
16 | 28   13 = D
16 |  1   12 = C
   |  0    1 = 1
```
$=(1CD)_{16}$

(c) $(76.5)_{10} = (?)_{16}$

```
16 |76
16 | 4   12 = C
   | 0    4 = 4
```
```
    .5
  x 16
  8.0
```
$=(4C.8)_{16}$

(d) $(46.45)_{10} = (?)_{16}$

```
16 |46
16 | 2   14 = E
   | 0    2 = 2
```
```
   .45
  x 16
  7.2      (7=)
  x 16
  3.2      (3=)
```
$=(2E.7\overline{3})_{16}$ *repeats

(e) $(231.78)_{10} = (?)_{16}$

```
16 |231
16 | 14    7 = 7
   |  0   14 = E
```
```
    .78
  x  16
  12.48     (C=)
  x  16
   7.68     (7=)
  x  16
  10.88     (A=)
```
$=(E7.C7A...)_{16}$

(f) $(1023.25)_{10} = (?)_{16}$

```
16 |1023
16 | 63    15 = F
16 |  3    15 = F
   |  0     3 = 3
```
```
   .25
  x 16
  4.00
```
$=(3FF.4)_{16}$