| Digit value |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Place value |  |  |  |  |  |
| Actual value |  |  |  |  |  |
| In sum form |  |  |  |  |  |


| Digit value |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Place value |  |  |  |  |  |
| Actual value |  |  |  |  |  |
| In sum form |  |  |  |  |  |

249358

| Digit value | 2 | 4 |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Place value |  | TTh |  |  |  |  |
| Actual value |  |  |  |  |  |  |
| In sum form |  |  |  |  |  |  |

LP $1 / 4$
£38 406.52

| Digit value | 3 | 8 |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Place value | TTh |  |  |  |  |  |  |
| Actual value |  |  |  |  |  |  |  |
| In sum form |  |  |  |  |  |  |  |



LP 1/5
a) 1002 m 20 cm
b) 47 litres 83 cl
c) 50 kg 430 g
d) $£ 60275 \mathrm{p}$
e) 16 km 39 m

| Th | H | T | U | t | h | th |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | m |
|  |  |  |  |  |  |  | litres |
|  |  |  |  |  |  |  | kg |
|  |  |  |  |  |  |  | km |


|  | $\frac{1}{1000}$ |  | 0.0001 |  | $\frac{1}{100}$ | 0.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.01 |  | 0.001 |  | $\frac{1}{10}$ |  |  |
| 10000 |  |  |  |  |  |  |

a)

$$
38347
$$

$$
38342
$$

$$
\begin{array}{|l|l|}
\hline 38355 & 38350 \\
\hline
\end{array}
$$

$$
38369
$$



| Next smaller hundred | Number | Next greater hundred |
| :---: | ---: | :--- |
| 26400 | 26482 | $\approx 26500$ |
|  | 604719 |  |
|  | 140348 |  |
|  | 1215750 |  |
|  | 499499 |  |
|  | 812500 |  |

a)

Round to the nearest 10 units:

b)

Round to the nearest unit:
c) Round to the nearest tenth of a unit:

$$
\begin{aligned}
£ 580.27 & \approx £ \square \\
120.55 \mathrm{~m} & \approx \square \mathrm{~m}
\end{aligned}
$$

66 litres $99 \mathrm{cl} \approx \square \ell$
$46 \mathrm{~kg} 87 \mathrm{~g} \approx \square \mathrm{~kg}$

a) 237 | HTh | TTh | Th | H | T | U | t | h |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | 2 | 3 | 7 |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

$$
\begin{aligned}
1 \times 237 & =237 \\
10 \times 237 & = \\
100 \times 237 & = \\
1000 \times 237 & =
\end{aligned}
$$

b) 65.2

| HTh | TTh | Th | H | T | U | t | h |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

c) 8.14

| HTh | TTh | Th | H | T | U | t | h |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

$$
\begin{array}{r}
1 \times 8.14= \\
10 \times 8.14= \\
100 \times 8.14= \\
1000 \times 8.14=
\end{array}
$$

mepp $M E P$ : Primary Project: Year 6
a)

| HTh | TTh | Th | H | T | U | t | h | th |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 4 | 3 | 0 | 0 | 0 |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

$143000 \div 1=$
$143000 \div 10=$
$143000 \div 100=$
$143000 \div 1000=$
b)

| HTh | TTh | Th | H | T | U | t | h | th |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

$$
\begin{aligned}
& 4510 \div 1= \\
& 4510 \div 10= \\
& 4510 \div 100= \\
& 4510 \div 1000=
\end{aligned}
$$

c)

| HTh | TTh | Th | H | T | U | t | h | th |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

$726 \div 1=$
$726 \div 10=$
$726 \div 100=$
$726 \div 1000=$

b)

c) 2.945 litres $=\square$
$\mathrm{cl}=2945$ $\square$ d) $72.8 \mathrm{ml}=\square$
$\mathrm{cl}=0.0728$
e) $5.26 \mathrm{~kg}=\square \mathrm{g}$
f) $12406 \mathrm{~g}=12.406$ $\square$
a) $60419+897=60416+\square=\square$
b) $5643+489=5643+500-\square=\square$
c) $12345-678=12367-\square=\square$
d) $9636-3482=9636-3000-500+\square=\square$
e) $41.3-12.4=41.3-12-\square=\square$
a) $628 \times 20=6280 \times \square=\square$
b) $135 \times 18=135 \times 2 \times 3 \times \square=\square$
c) $135 \times 18=135 \times 20-\square=\square$
d) $43 \times 51=43 \times 50+\square=\square$
e) $305 \times 14=305 \times 10+305 \times \square=\square$
f) $15.2 \div 25=15.2 \times 100 \div 2 \div \square=\square$
g) $252 \div 6=252 \div 2 \div \square=\square$
a) $2087-1022=$
b) $249+63+151+27=$
c) $13 \times 4 \times 25=$
d) $1063 \times 29 \times 0=$
e) $8.2 \times 13=$
f) $3740 \times 170=$
g) $998 \times 35=$
h) $28500 \div 25 \div 4=$

a)
to the nearest 10 units:
£503 455
7459.8 m

300005 g
15 litres 46 cl
83104.55 km
b)
to the nearest unit:
£61132 p
88 cm 6.9 mm
4205.29 kg
1453.51 litres

83104 km 52 m
c)
to the nearest 10th:
£101154 p
1766.21 cm
4205.29 kg
1994.06 ml
7477.47 km

Unit $\xrightarrow{\times 10} \square \xrightarrow{\times 10} \square \xrightarrow{\times 10} \square \xrightarrow{\times 10} \square \square$

$\square$
$\square$

T Thu $\xrightarrow{\times 10}$ $\square$
$\square$
$\square$
$\square$

$$
\xrightarrow{\times 10}
$$

$\square$
a) $7 \times \ldots=56,7 \times \ldots=5600, \quad \ldots \times 7=5.6, \quad 70 \times \ldots=5600$
b) $\_\int_{-} \times 750,5 \times \_=75, \quad 50 \times \_=750, \quad 50 \times \_=75$
c) $60 \times \_=420, \ldots \times 60=4200,600 \times \_=4200,60 \times \ldots=42$
d) $\_\_4=500, \ldots \times 40=5000, \ldots \times 40=50000,40 \times \_=500$
e) $4 \times \ldots=100,4 \times \ldots=1000, \ldots \times 40=1000, \quad \_\times 40=100$
f) $\_\_\times 15=120, \ldots \times 150=1200, \quad 15 \times \_=1200, \quad \_\times 150=120$

| a) | $260+30=$ | $2600+300=$ | $26000+3000=$ |
| :---: | :---: | :---: | :---: |
|  | $5260+30=$ | $52600+300=$ | $526000+3000=$ |
|  | $5260+430=$ | $52600+4300=$ | $526000+43000=$ |
| b) | $320-170=$ | $3200-1700=$ | $2000-17000=$ |
|  | $625-170=$ | $6250-1700=$ | $62500-17000=$ |
|  | $57-37=$ | 585-385= | 5899-3899 = |
| c) | $300 \times 8=$ | $300 \times 80=$ | $300 \times 8000=$ |
|  | $26 \times 4=$ | $2600 \times 4=$ | $260 \times 4000=$ |
|  | $43 \times 7=$ | $430 \times 70=$ | $4300 \times 700=$ |
| d) | $60 \div 12=$ | $600 \div 12=$ | $60000 \div 12=$ |
|  | $420 \div 7=$ | $4200 \div 70=$ | $420000 \div 7000=$ |
|  | $8 \div 20=$ | $7800 \div 200=$ | $78000 \div 20000=$ |

a) $368+152=152+368$ $\square$
b) $1230 \times 21=21 \times 1230 \square$
c) $290-0=0-290$ $0 \times 8=8 \times 0$
$\square$
$\square$
d) $(82+38)+15=82+(38+15)$ $\square$

$$
(670+130)-100=670+(130-100)
$$

$\square$ $(60 \div 3) \times 5=60 \div(3 \times 5) \quad \square$
$\square$
$\square$

$$
(360-160)-30=360-(160-30)
$$

$$
400-(250+50)=400-250-50 \square
$$

$$
360-(160-30)=360-160+30
$$

e) $(18 \times 2) \times 4=18 \times(2 \times 4)$

$$
60 \div(3 \div 5)=60 \div 3 \div 5
$$

f) $7 \times(15+25)=7 \times 15+7 \times 25$
$(18 \times 4) \div 2=18 \times(4 \div 2) \quad \square$

$$
(80 \div 4) \div 2=80 \div(4 \div 2) \square
$$

$(80 \div 4) \div 2=80 \div(4 \div 2) \square$

$$
80 \div(4 \div 2)=80 \div 4 \div 2
$$

$80 \div(4 \div 2)=80 \div 4 \div 2 \quad \square$
$\square$

$$
7+(15 \times 25)=(7+15) \times(7+25)
$$

$7+(15 \times 25)=(7+15) \times(7+25)$
$\square$

$$
7230-430=430-7230 \square
$$

$$
460 \div 23=23 \div 460
$$

$\square$

$$
1 \times 167=167 \times 1
$$

$$
0 \div 63=63 \div 0
$$


a) $16 \times(26+30)=$
b) $37 \times(200-100)=$
c) $(156+44) \times 5=$
d) $(200-20) \times 45=$
e) $(78+96) \div 6=$
g) $750 \div(10+15)=$
i) $(430+220) \div 1=$
k) $(365-165) \div 1=$
m) $(147-147) \div 29=$
o) $4 \times(12 \times 25)=$
q) $350 \div(14 \times 5)=$
s) $9 \times(0 \div 3)=$


Area of:
$\mathrm{A}: \square$
$\mathrm{cm}^{2}=\square \mathrm{mm}^{2}$
B: $\square \mathrm{cm}^{2}=\square \mathrm{mm}^{2}$
$\mathrm{C}: \square$
$\mathrm{cm}^{2}=\square \mathrm{mm}^{2}$
$\mathrm{D}: \square$
$\mathrm{cm}^{2}=\square$
$\mathrm{mm}^{2}$
E: $\square$ $\mathrm{cm}^{2}=\square \mathrm{mm}^{2}$ $\square$ $\mathrm{cm}^{2}=\square$ $\mathrm{mm}^{2}$

Tommy's method

$$
\begin{array}{c|cr|rr|r}
a=15 \mathrm{~m}, b=57 \mathrm{~m} & a=17 \mathrm{~m}, b=57 \mathrm{~m} & a=19 \mathrm{~m}, b=57 \mathrm{~m} \\
15 & 57 & 17 & 57 & 19 & 57 \\
7 & 114 & 8 & 114 & 9 & 114 \\
3 & 228 & 4 & 228 & 4 & 228 \\
1 & 456 & 2 & -456 & 2 & -456 \\
A= & 1 & 912 & 1 & 912 \\
& & 855 \mathrm{~m}^{2} & A= & 969 \mathrm{~m}^{2} & A=1083 \mathrm{~m}^{2}
\end{array}
$$

$$
a=16 \mathrm{~m}, b=57 \mathrm{~m} \quad a=18, b=57 \mathrm{~m} \quad a=20 \mathrm{~m}, b=57 \mathrm{~m}
$$

|  |  |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |



a) $410.5+410.5+410.5+410.5=$
b) $7063.6-20.4-30.2=$
c) $160 \div 100 \times 5=$
d) $12 \times 12+2 \times 10 \times 10=$
e) $5 \times(32+110) \div 5=$
f) $761 \times 100 \div 5 \div 2=$
g) $7867+435-128-207=$
h) $200.6-33.2 \times 3+899=$

a) $\begin{array}{r}712\end{array} 48$

|  | 7 | 2 | 4 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| + | 8 | 7 | 1 | 7 |
|  |  |  |  |  |

i) $7348+8717=$
ii) $7348+8617=$
iii) $7278+8747=$
iv) $7248+9717=$
v) $6248+9717=$
vi) $7240+8725=$
b) $\begin{array}{r}4 \\ -\quad 1\end{array} 387 \begin{array}{r}1 \\ - \\ \hline\end{array}$

|  | 4 | 3 | 7 |
| :---: | :---: | :---: | :---: |
| - | 1 | 8 | 3 |
|  |  |  |  |

i) $4370-1837=$
ii) $4372-837=$
iii) $4272-1737=$
iv) $4382-1837=$
v) $4372-2837=$
vi) $4472-1737=$
a)

b)


a) $\quad$\begin{tabular}{r|r|r|r}
3 \& 6 \& 4 \& 2 \\

- \& 2 \& 2 \& 3
\end{tabular}


b)

a) $3265 \times 3 \approx \square \times 3=\square$

b) $8903 \times 6 \approx$

d)


c) $8903 \times 600 \approx$
$=$

e)

|  | 9 | 3 | 0 |
| :--- | :--- | :--- | :--- |
|  |  |  | $\times$ |
|  |  |  |  |

f)

a)

|  | 3 | 8 |
| :---: | :---: | :---: |
| $\times$ | 1 | 2 |
|  |  |  |
|  |  |  |
|  |  |  |

b)

c)

|  |  | 2 | 4 | 0 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $x$ | 5 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

d)

|  |  | 8 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\times$ | 2 | 7 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

e)

|  |  | 7 | 6 | 5 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\times$ | 1 | 7 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

f)

g)

h)

a) $\left.\begin{array}{|c|c|c|c|}\hline & 4 & & \\ \hline+ & -4 & 7 & \\ \hline 1 & 2 & 2 & 2\end{array}\right]$

b) | 8 |  | - | 5 |
| :---: | :---: | :---: | :---: |
| - | 3 | 2 | - |
| 4 | 4 | 4 | 4 |

b) |  | 7 | 7 | 3 |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 6 | - |  |
| 1 | 2 | 2 | 2 | 1 |

d) |  |  | -8 | 0 |
| :--- | :--- | :--- | :--- |
| 2 | 5 |  |  |
| 5 | 5 | 5 | 5 |

a)

c)


a)

b)

c)

a)
$2 5 \longdiv { 7 3 } 8 2$
b)
c)



LP 13/2 and 13/3
a) Peter is 16 years old but his savings are just one fifteenth of the savings of his sister who is 5 years younger than he is. How much has Peter saved if his sister has saved $£ 7500$ ?
b) In London, 15 mm of rain fell at 3 am . At 1800 hours, there was another downpour.

How much rain fell then?
c) Cindy is 5 years old and weighs 24 kg .

Her grandfather is 13 times older.
How old is Cindy's grandfather and how much does he weigh?
a) Christopher bought a painting for $£ 2600$. Then he sold it 3 weeks later for $£ 2800$.

After another 2 weeks, he changed his mind and bought the painting back for $£ 3100$.

After 1 week, he sold the painting again for $£ 3200$.
Did he make a profit or a loss on the painting and how much was it?
b) A box 15 cm deep holds 13 kg of tomatoes and a box 20 cm deep holds 17 kg of tomatoes.
What is the total price of all the tomatoes in the 2 boxes if 1 kg of tomatoes costs $£ 2.25$ ?
c) Kate made some jam from 25 kg of apricots and 7 kg of sugar. She lost 8 kg of fruit through boiling and then sieving to remove the stones and skin.

How much did it cost to make 1 kg of jam if 1 kg of apricots cost $£ 1.28,1 \mathrm{~kg}$ of sugar cost $£ 1.10$, and other costs (covers and labels) were $£ 1.25$ ?
d) A shopkeeper bought 120 kg of potatoes from one farmer for 76 p per kg and 59 kg from another farmer for 69 p per kg .
He then sold all the potatoes at the same price so that he made a profit of 16 p per kg .

At what price did he sell the potatoes?
a)

| 5173 |
| ---: |
| +6598 |

i) $5183+6599=$
ii) $5173+6498=$
iii) $15173+598=$
iv) $5273+6698=$
v) $5173+6098=$
vi) $5186+6585=$
b)

i) $7405-2966=$
ii) $7505-2766=$
iii) $7410-2865=$
iv) $7505-3066=$
v) $8405-1866=$
vi) $7495-2956=$
a)

b)

$$
-\begin{array}{|c|c|c|c|c|}
\hline & 2 & & 7 & 3 \\
\hline 4 & & 6 & & \\
\hline 1 & 2 & 4 & 3 & 4 \\
\hline
\end{array}
$$

c)

d)

|  | 1 | 5 | 3 |
| :---: | :---: | :---: | :---: |
|  | 5 | 6 |  |

a)

b)


| $r=0$ | $r=1$ | $r=2$ | $r=3$ | $r=4$ | $r=5$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

LP 16/2


| Number |  | 3 | 5 | 12 | 43 | 79 | 154 | 228 | 2430 | 2433 | 2436 | 2437 | 2435 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Remainder after dividing by: | (2) |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (5) |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (10) |  |  |  |  |  |  |  |  |  |  |  |  |

## Remainder


i) $7=0 \times 10+7$ $33=3 \times 10+3$ $60=\square \times 10+\square$ $85=\underbrace{\square \times 10}+\square$

Divisible by 10,2 and 5


We only need to look at the units digit.
b) $\begin{aligned} & 2176=\square \times 100+\square \\ & 7390=\square \times 100+\square \\ & 28408=\square \times 100+\square \\ & 11950=\square \times 100+\square \\ & 678462=\underbrace{\square}_{\begin{array}{c}\text { Divisible by } \\ 100,4 \text { and } 25\end{array}} \quad \begin{array}{l}\text { We only } \\ \text { need to } \\ \text { look at } \\ \text { the tens } \\ \text { and units } \\ \text { digits. }\end{array} \\ &\end{aligned}$
a)

$$
\text { i) } \begin{aligned}
1 & =0+1 \\
10 & =9+1 \\
100 & =99+1 \\
1000 & = \\
10000 & =
\end{aligned}
$$

Divisible by 9 and 3

ii) | 2 | $=0 \times 2+2$ |
| ---: | :--- |
| 20 | $=9 \times 2+2$ |
| 200 | $=99 \times 2+2$ |
| 2000 | $=$ |
| 20000 | $=$ |

Divisible by
9 and 3

$$
\text { iii) } \begin{aligned}
7 & =0 \times 7+7 \\
70 & =9 \times 7+7 \\
700 & =99 \times 7+7 \\
7000 & = \\
70000 & =
\end{aligned}
$$

Divisible by 9 and 3
b)
i) When 1000 is divided by 9 or by 3 , the remainder is the same as when $\square$ is divided by 9 or by $\square$
ii) When 200 is divided by $\square$ or by 3 , the remainder is the same as when $\square$ is divided by $\square$ or by 3 .
iii) When 70000 is divided by 9 or by 3 , the remainder is the same as when $\square$ is divided by 9 or by 3 .
a)

| Number |  | 8000 | 300 | 40 | 6 | 8346 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Remainder <br> after dividing <br> by: | $(9)$ |  |  |  |  |  |
|  | $(3)$ |  |  |  |  |  |

b)

| Number |  | 70000 | 4000 | 500 | 30 | 8 | 74538 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Remainder <br> after dividing <br> by: | $(9)$ |  |  |  |  |  |  |
|  | $(3)$ |  |  |  |  |  |  |

a) When 7000 is divided by 9 or by 3 , the is the same as when 7 is $\square$ by 9 or by 3 .
b) When 400 is divided by $\square$ or by 3 , the remainder is the same as when $\square$ is divided by 9 or by 3 .
c)

When 50 is

by 9 or by 3 , the remainder
is the same as when $\square$ is divided by 9 or by 3 .
d) When 8 is divided by $\square$, the remainder is itself, but when 8 is divided by $\square$ the $\square$ is 2 .
e) When 7458 is divided by 9 , the remainder is the same as when $\square$ is divided by 9 , so the remainder is $\square$.
f)

When 7458 is divided by 3 , the $\square$ is the same as when $7+4+5+8=24$ is divided by 3 , so the remainder is


## $10 \leq n \leq 30$

## Divisible by 3

Multiple of 2

## $10 \leq n \leq 30$






LP 18/5a

## $n \geq 0$



a) $\left.\begin{array}{r} \\ \\ 1\end{array} \left\lvert\, \begin{array}{c|c|c|c|c|c|}3 & 1 & 6 & 5 & 8 \\ \hline & 2 & 4 & 6 & 8 & 5\end{array}\right.\right)$
b)

c)

| 3 | 3 | 3 | 3 | 3 | 3 | 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3 | 3 | 3 | 3 | 3 | 3 |  |
| - |  | 3 | 3 | 3 | 3 | 3 |  |
|  |  |  |  | 3 | 3 | 3 | 3 |
|  |  |  |  | 3 | 3 | 3 |  |
|  |  |  |  |  |  |  |  |

d)

$$
\left.\begin{array}{|c|c|c|c|c|c|}
\hline & 8 & 5 & 3 & 2 & 0 \\
4 \\
- & 3 & 2 & 2 & 0 & 6
\end{array} \right\rvert\,
$$

e)
$\left.\begin{array}{|c|c|c|c|c|c|}6 & 5 & 7 & 4 & 3 & 9 \\ \hline & & 7 & 6 & 0 & 2\end{array}\right)$
f)

$-$| 3 | 3 | 3 | 3 | 3 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | 5 | 5 | 5 | 5 |
|  |  |  |  |  |  |

a) | 1 | 4 | 2 | 8 | 5 | 7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\times$ | 6 |
|  |  |  |  |  |  |  |

b)

|  |  | 2 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: |

c)

|  |  |  | 8 | 4 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\times$ | 3 | 0 |
|  |  |  | 1 |  |
|  |  |  |  |  |
|  |  |  |  |  |

d)

e)

$$
\begin{array}{l|l|l|l|l|}
\hline 7 & 9 & 9 & 9 & 9 \\
\hline
\end{array}
$$

f)

a) $\begin{array}{r}652418 \mathrm{~mm} \\ 1043706 \mathrm{~mm} \\ +\quad 93038 \mathrm{~mm}\end{array}$
d) 3405261 mm
$-1094283 \mathrm{~mm}$
b) $\quad 65241.8 \mathrm{~cm}$ 104370.6 cm $+\quad 9303.8 \mathrm{~cm}$
$\qquad$
e) 340526.1 cm $-109428.3 \mathrm{~cm}$
c) $\quad 652.418 \mathrm{~m}$ 1043.706 m $+\quad 93.038 \mathrm{~m}$
f) 3405.261 m - 1094.283 m
$\qquad$
a)

6425 m 802600 m
35000 m 710 m
$+\quad 1015 \mathrm{~m}$
b) 432068 m $-210875 \mathrm{~m}$
6.425 km

$$
+
$$

432.068 km
-
a)


b)

$$
6 \longdiv { 5 0 9 4 } \mathrm { mm }
$$

$$
6 \longdiv { 5 0 0 9 . 4 } \mathrm { cm }
$$

$$
6 \longdiv { 5 . 0 9 4 } \mathrm { m }
$$

a)

| 1 | 3 | 3 | 9 | 3 | 2.5 | cm |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

b)

| 8 | 6 | 4 | 4 | 5 | 4. |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | cl |  |  |  |  |  |

c)

| 2 | 7 | 6.1 | 9. | km |
| :--- | :--- | :--- | :--- | :--- |

a) | 4 | 0 | 5.3 | cm |
| :--- | :--- | :--- | :--- |
|  | $\times$ | 2 | 3 |

b)

c)

a)

b)

c)

a)

| 3 | 8 | 2 | 6 |
| ---: | :---: | :---: | :---: |
| +8 | 5 | 1 | 9 |
|  |  |  |  |

b)

| 38.26 |
| ---: |
| +85.19 |
|  |

c)

| 0.3 | 8 | 2 | 6 |
| :---: | :---: | :---: | :---: |
| +0.8 | 5 | 1 | 9 |
|  |  |  |  |

d) |  | 1 | 7.3 | 3 | 5 |
| ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
| + |  | 9.4 | 8 |  |
|  |  |  |  |  |
|  |  |  |  |  |

e)
$6 \quad 0 \quad 8.7$
5.42

$+\quad 94.3 \quad$| 9 |
| :--- |

f)

|  | 8 | 0.0 | 9 |
| :---: | :---: | :---: | :---: |
| 2 | 5 | 6 |  |
|  |  | 0.8 | 2 |
|  |  |  |  |



c) | 8 | 2 | 5 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| - | 4 | 1 | 3.9 | 4 |
|  |  |  |  |  |



e) |  | 5 | .3 | 0 | 4 |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| - | 2 | 4 | 3 | 3 |  |
|  |  |  |  |  |  |

f) | 5 | 6 | 7 | 0 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| - | 4 | 6 | 7 | 1 |
|  |  |  |  |  |

a) $125 \times 8=$
$12.5 \times 8=$
$1.25 \times 8=$
$0.125 \times 8=$
b) $87 \times 52=$
$8.7 \times 52=$
$0.87 \times 52=$
$0.087 \times 52=$
c) $154 \times 16=$
$15.4 \times 16=$
$1.54 \times 16=$
$0.154 \times 16=$
d) $75 \div 3=$
$7.5 \div 3=$
$0.75 \div 3=$
$0.075 \div 3=$
e) $673 \div 5=$
$67.3 \div 5=$
$6.73 \div 5=$
$0.673 \div 5=$
f) $720 \div 12=$
$72 \div 12=$
$7.2 \div 12=$
$0.72 \div 12=$
E:
E:
E:
a) $2 4 \longdiv { 2 6 . 0 4 }$

b) |  |  |  |  |  |
| ---: | ---: | ---: | ---: | :--- |
| 6 | 6 | 8 | 0 | 5.2 |

c)

a) $6.7+10.8=$

$$
a+b=c,
$$

$$
a=
$$

$$
b=
$$

b) $8.25-4.6=$

$$
a-b=c
$$

$a=$
$b=$
c) $14.3 \times 5=$
$a \times b=c$,
$a=$
$b=$

d) $42.6 \div 3=$

$$
a \div b=c, \quad a=
$$

$b=$

a)

|  | 2 | 5 | 4 | 8 | 6 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | 4 | 7 | 1 | 3 | 2 |
|  | 3 | 8 | 9 | 5 | 9 | 7 |
| + | 4 | 6 | 3 | 9 | 0 | 8 |
|  |  |  |  |  |  |  |

b)

|  |  |  | 1 | 4 | 3 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 8 | 9 | 7 | 2 | 5 | 5 |
|  |  |  |  | 8 | 8 | 7 |
| 4 | 6 | 8 | 9 | 1 | 3 | 2 |
|  |  | 7 | 5 | 6 | 3 | 8 |
|  |  |  |  |  |  |  |

c)

| 5 | 5 | 5 | 5. | 5 | 5 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 | 6 | 6. | 6 | 6 | 6 |
|  |  | 5 | 5. | 5 | 5 | 5 |
|  |  |  | 6.6 | 6 | 6 |  |
|  |  |  | 0.5 | 5 | 5 |  |
|  |  |  |  |  |  |  |

d)

$$
\begin{array}{|c|c|c|c|c|c|}
\hline 9 & 0 & 4 & 3 & 1 & 5 \\
- & 4 & 3 & 8 & 1 & 6 \\
\hline & & & & & \\
\hline
\end{array}
$$

e) | 1 | 0 | 9 | 7 | 0 | 2 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

f) | 7 | 7 | 7 | 7. | 7 | 7 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | 8 | 8 | 8.8 | 8 | 8 |  |
|  |  |  |  |  |  |  |

a)

| 3 | 7 | 5 | 0 | 7 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2 |  |
|  |  |  |  |  |

b)

| $\square$ |  | 3 | 4 | 0 | 7 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\times$ | 5 | 6 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

c)


d) | 7 | 8 | 8 | 8 | 8 | 8 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

e)

f)

| 2 | 7 | 3.6 | 7 |
| :--- | :--- | :--- | :--- |

$$
\begin{array}{lllllllll}
-2.5 & 12 & -0.5 & 3.2 & -4.3 & 7.5 & -2 & 0.6 & 9
\end{array}
$$


a)

$$
(+11)+(-7)=
$$

$$
(+1100)+(-700)=
$$

b) $(+6)+(-15)=$

$$
(+60)+(-150)=
$$

$(+600)+(-1500)=$

$$
(+0.6)+(-1.5)=
$$

c) $(-23)+(-41)=$

$$
(-230)+(-410)=
$$

$(-2300)+(-4100)=$

$$
(-2.3)+(-4.1)=
$$

d) $15+(-80)=$

$$
150+(-800)=
$$

$1500+(-8000)=$

$$
1.5+(-8)=
$$

e) $-28+36=$
$-2800+3600=$

$$
\begin{aligned}
& (+110)+(-70)= \\
& (+1.1)+(-0.7)=
\end{aligned}
$$

$$
-280+360=
$$

$$
-2.8+3.6=
$$

a) $(+18)-(+5)=$
b) $(+7)-(+32)=$
c) $(-43)-(-15)=$
d) $(-6)-(-21)=$
e) $(+65)-(-20)=$
f) $(-40)-(+32)=$
g) $(-33)-0=$
h) $0-(+81)=$
$(+0.7)-(+3.2)=$
$(+1.8)-(+0.5)=$
$(-4.3)-(-1.5)=$
$(-0.6)-(-2.1)=$
$6.5-(-2)=$
$-4-(+3.2)=$
$-3.3-0=$
$0-(+8.1)=$
a) i) $(+83)+(+36)=$
b) i) $(+100)+(-70)=$
c) i) $(+26)+(-82)=$
d) i) $(-49)+(+94)=$
e) i) $(-35)+(-53)=$
f) i) $0+(+42)=$
g) i) $0+(-27)=$
h) i) $48+(-48)=$
ii) $(+8.3)-(-3.6)=$
ii) $(+1)-(+0.7)=$
ii) $(+2.6)-(+8.2)=$
ii) $(-4.9)-(-9.4)=$
ii) $(-3.5)-(+5.3)=$
ii) $0-(-4.2)=$
ii) $0-(+2.7)=$
ii) $4.8-(+4.8)=$
a) $45-39+14-15+26-11=$
b) $63-98+37-32+27-37=$
c) 207-57-140-10+23-48=
d) $-200-50-102-42+300+64=$
e) $1416-234-172+584-628=$
f) $1000-2450+1550-56-944=$
g) $-(4-6)-(-5)=$
h) $5-(-9-14)=$
a)

| $x$ | -15 | -12 | -10 | -6 | -2.5 | -1 | 0 | 1 | 2 | 5.5 | 8 | 10 | 14 | 15 | 15.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 15 |  | 10 |  | 2.5 |  | 0 | 1 |  | 5.5 |  |  |  | 15 |  |

Rule: $y=$
b)

| $x$ | -15 | -12 | -10 | -6 | -2.5 | -1 | 0 | 1 | 2 | 5.5 | 8 | 10 | 14 | 15 | 15.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 15 |  | 10 |  | 2.5 |  | 0 | -1 |  | -5.5 |  |  |  | -15 |  |

Rule: $y=$


| $a$ | 25 | 8 | -12 |  | -10 | 3.1 |  | -10.5 | 0.3 |  | -1.2 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $b$ | -100 |  | 48 | -36 |  |  | 400 |  | -1.2 | 0 |  | -6 | 4.4 |

Rule: $a=\quad b=$
a) $\square$ $=-12.5$, $\square$ $\times 3=-9.6$, $\square$ $\times(-7)=-28$
b) $200 \div 40=\square,-36 \div(+4)=\square,-60 \div(-12)=\square, 48 \div(-8)=$ $\square$
c) $\square \div(+7)=-4, \square \div(-6)=11, \square \div 5=1.2, \square \div(-3)=-40$
d) $(-75) \div \square=-25,(-39) \div \square=13,4.2 \div \square=1.4,150 \div \square=-50$
a)
$(+27) \div(+3)=$
$(+27) \div(-3)=$
$(+18) \div(-3)=$
$(+9) \div(-3)=$
$0 \div(-3)=$
$(-9) \div(-3)=$
$(-18) \div(-3)=$
$(-27) \div(-3)=$
$(-27) \div(+3)=$
b)
$(+18) \div(+3)=$
$(+9) \div(+3)=$
$0 \div(+3)=$
$(-9) \div(+3)=$
$(-18) \div(+3)=$
c)
$8 \div(-2)=$
$4 \div(-2)=$
$2 \div(-2)=$
$0 \div(-2)=$
$-2 \div(-2)=$
$-4 \div(-2)=$
$-8 \div(-2)=$

|  |  | 11 |  |  | 11 | 11 |  | 11 | 11 | I |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| II |  | の |  | $m$ | $\succ$ | $\cdots$ | 11 | $\mathcal{\sim}$ | $\infty$ | $\bigcirc$ | II |
| $\stackrel{ }{ }$ | $\pm$ | $\stackrel{1}{1}$ | 小 | $\cdots$ | 1 | $\cdots$ | $\bigcirc$ | $\perp$ | $\bigcirc$ | ＋ | $\infty$ |
| $\times$ | $\times$ | $\times$ | ঔ | ก | $\cdots$ | $\stackrel{ }{-}$ | $\stackrel{1}{ }$ | $\cdots$ | $\pm$ | $\bigcirc$ | ＋ |
| ¢ | $\infty$ | in | $\stackrel{+}{+}$ | $\cdots$ | － | $\stackrel{+}{+}$ | $\stackrel{\sim}{n}$ | $\bigcirc$ | c | $\stackrel{1}{ }$ | 1 |
| ＋ | $\sim$ | ＋ | $\stackrel{+}{+}$ | $\propto$ | ＋ | $\stackrel{+}{\sim}$ | $\stackrel{+}{\square}$ | 1 | $\stackrel{0}{6}$ | $\cdots$ | $\cdots$ |
| ＋ | I | I | I | さ | $\stackrel{1}{\perp}$ | $\stackrel{1}{1}$ | I | $\stackrel{\sim}{n}$ | $\stackrel{1}{1}$ | $\stackrel{+}{1}$ | $\cdots$ |
| ล | ๑ | 0 | O | （1） | $\triangle$ | （0） | $\bigcirc$ | A | $\therefore$ | 3 | $\bigcirc$ |

MEP: Primary Project: Year 6

a) i) $(+12.3)+(-24)=$
ii) $(-2300)+(-1100)=$
iii) $6.5+(-2.3)+(+5)+(-9.2)=$
b) i) $4.7-(+5.3)=$
ii) $-210-(+120)=$
iii) $6.8-(-2)=$
iv) $-40-(-50)=$
c) i) $+8.1 \times(-6)=$
ii) $-150 \times 9=$
iii) $-10.5 \times(-5)=$
iv) $-2 \times 3 \times(-1) \times(+4) \times(-5)=$
d) i$) 3 \div(-2)=$
iii) $(-8.4) \div(-7)=$
ii) $(-105) \div 21=$ iv) $-123 \div 1=$
v) $41.3 \div(-1)=$
e) i) $(-3) \times(-3)=$
ii) $(-3) \times(-3) \times(-3)=$
iii) $(-3) \times(-3) \times(-3) \times(-3)=$ iv) $(-4) \times(-4) \times(-4)=$


a) Rule: $y=(-2) \times x$

| $x$ | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $y$ |  |  |  |  |  |  |  |  |  |  |  |  |  |

b) Rule: $y=(-2) \times x+3$

| $x$ | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $y$ |  |  |  |  |  |  |  |  |  |  |  |  |  |


a) $55-0.5=$
b) $16-4.3=$
c) $-76-(-2.8)=$
d) $-32-(-0.5)=$
e) $84-(-11.5)=$
f) $-90-5.6=$
g) $-11-0.11=$
h) $0.44-6.9=$
i) $10-(-3.5)=$
j) $-12.1-(-12.1)=$
$5.5-0.05=$
$1.6-0.43=$
$-7.6-(-0.28)=$
$-3.2-(-0.05)=$
$8.4-(-1.15)=$
$-9-0.56=$
$-1.1-0.011=$
$0.044-0.69=$
$1-(-0.35)=$
$-1.21-(-1.21)=$

| $x$ | -1 | -0.8 | -0.6 |  | -0.2 | -0.1 | 0 |  | 0.3 |  | 0.8 | 0.9 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | -0.5 |  |  | -0.2 |  | -0.05 |  | 0.05 |  | 0.3 |  |  | 0.5 |

Rule: $\quad x=$

$$
y=
$$

| $x$ | -0.8 | -0.6 | -0.5 | -0.4 | -0.2 | -0.1 | 0 |  |  |  | 0.8 | 0.9 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | -1 |  | -0.7 |  |  | -0.3 |  | -0.1 | 0 | 0.3 |  |  | 0.8 |

Rule: $\quad x=$

$$
y=
$$

| $x$ |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $y$ | -1 |  |  |  |  |  |  |  |  |  |  |  |  |

Rule: $x=\quad y=$


