## Perform calculations that cross zero

(1) Complete the calculations represented on the number lines.

(2)

Fill in the missing numbers on the number lines.
Tommy is finding 7 less than 3


Show how you can use the number line to get the answer.
Discuss your method with a partner.
(4) Complete the calculations.
a) $7-5=$ $\square$
e) $-3-5=$ $\square$
b) $5-7=$
f) $-8+2=$ $\square$
c) $-5+7=$ $\square$
g) $-2+10=$ $\square$
d) $-7+5=$
h) $\square$
(5) Complete the number sentences.
a) $5-9=$ $\square$
$\square$
b)
-1 - $\square$

c) $\qquad$ -16
$-28=$ $\square$ $+16$
$\square$ - 16
d) $-4+34-43=$ $\square$ $102=-9+$ $\square$

$\square$ $=-7$
) 1 -
$\square=-59-7+46$
(6)

Teddy is working out the answer to 2 less than negative 3


What mistake has Teddy made?
What is the correct answer? $\square$

The table shows the temperature in five cities at 12 midnight.

| City | Temperature |
| :---: | :---: |
| Moscow | $-15^{\circ} \mathrm{C}$ |
| New York | $-6^{\circ} \mathrm{C}$ |
| London | $3{ }^{\circ} \mathrm{C}$ |
| Paris | $8{ }^{\circ} \mathrm{C}$ |
| Dubai | $22^{\circ} \mathrm{C}$ |

a) The temperature in Moscow rises by $8^{\circ} \mathrm{C}$ by 12 noon. What is the temperature at 12 noon?
b) The temperature in London drops by $7{ }^{\circ} \mathrm{C}$. What is the new temperature?
c) The temperature in New York at 12 noon is $6^{\circ} \mathrm{C}$.

By how many ${ }^{\circ} \mathrm{C}$ has the temperature risen?

$\square$
$]^{\circ} \mathrm{C}$
$\square$ ${ }^{\circ} \mathrm{C}$
(8) Find the difference between $A$ and $B$.

(9)

Find the missing terms in the linear sequences.
a) $-10,-7,-4, \square, \square, \square$
b) 9,2 , $\square$
c) $-19,-24$,

$\square$
 , -44
d) -2 , $\square$ , -0.5, $\square$
$\square$
10) Simplify the expressions by collecting like terms.
a) $3 a-7 a \equiv$ $\square$
d) $-7 e-13 e-2 e \equiv$ $\square$
b) $4 b-5 b-5 b \equiv$ $\square$
e) $8 g-g+9 h-8 g-9 h \equiv$ $\square$
c) $0.5 d-d \equiv$ $\square$
f) $-2.3 k+3 k \equiv \square$

Four numbers are put in ascending order.


## 8

- The difference between the largest and smallest number is 11
- The total of the 4 cards is 10
a) Find the three missing numbers. $\square$

b) How many different solutions can you find?

