
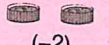
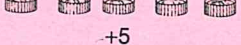








Operations Using Opposites




Compare. $(+3) - (-2)$  less  =  +5

$(+3) + (+2)$  and  =  +5

↑ opposite operations ↑ opposite numbers

↑ same result

Compare. $(-3) - (+1)$  less  =  -4

$(-3) + (-1)$  and  =  -4

↑ opposite operations ↑ opposite numbers

↑ same result

To subtract a number, you can add its opposite.

WORKING TOGETHER

1. Give the opposite operation with the opposite number.

- a. $- (+3)$ b. $+ (-2)$
c. $+ (+5)$ d. $- (-1)$

2. Evaluate. Which of the two is easier?

- a. $(-3) - (-4)$ b. $(+2) + (-3)$
 $(-3) + (+4)$ $(+2) - (+3)$
c. $(-7) + (+4)$ d. $(+6) - (+2)$
 $(-7) - (-4)$ $(+6) + (-2)$
e. $(-5) - (+3)$ f. $(+4) + (+5)$
 $(-5) + (-3)$ $(+4) - (-5)$

3. Copy and complete.

- a. $(-2) - (-4) = (-2) + \square$
b. $(+6) - (+3) = (+6) + \square$
c. $(+5) - (-3) = (+5) + \square$
d. $(-8) - (+1) = (-8) + \square$

4. Express the subtraction as an addition, then evaluate.

- a. $(+9) - (+7)$ b. $(+8) - (-1)$
c. $(-6) - (-3)$ d. $(+2) - (-7)$
e. $(+2) - (+5)$ f. $(-6) - (+2)$

APPLICATIONS AND EXERCISES

1. Copy and complete.

- a. $(+4) - (+2) = (+2)$ $(+4) + (-2) = \square$
b. $(+4) - (+1) = \square$ $(+4) + (-1) = \square$
c. $(+4) - (0) = \square$ $(+4) + (0) = \square$
d. $(+4) - (-1) = \square$ $(+4) + (+1) = \square$
e. $(+4) - (-2) = \square$ $(+4) + \square = \square$
f. $(+4) - (-3) = \square$ $(+4) + \square = \square$

2. Express the subtraction as an addition, then evaluate.

- a. $(+7) - (-3)$ b. $(-4) - (-2)$
c. $(-5) - (+6)$ d. $(+6) - (+9)$
e. $(-1) - (-7)$ f. $(-6) - (+4)$
g. $(+2) - (-1)$ h. $(0) - (-4)$
i. $(0) - (+8)$ j. $(-6) - (-6)$
k. $(+15) - (-3)$ l. $(+24) - (+30)$

3. Evaluate.

- a. $(+6) - (-3)$ b. $(-7) - (-7)$
c. $(+9) - (+6)$ d. $(-7) - (+7)$
e. $(+11) - (+6)$ f. $(-8) + (-2)$
g. $(+12) - (-7)$ h. $(-6) - (-9)$
i. $(-20) + (+12)$ j. $(+3) - (-17)$

4. Write the addition or subtraction sentence to describe the situation.

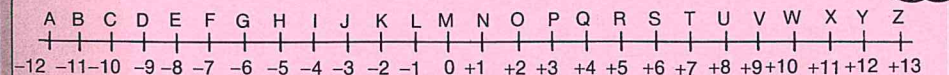
- a. walk backward 15 steps then forward 18 steps
b. owe \$5 then repay \$3
c. temperature was -20°C but rose 5°C
d. a profit of \$40 followed by a loss of \$45
e. had \$10 then lost \$2
f. owe \$10 then borrow \$2 more
g. in debt by \$8 then earn \$6
h. earn \$7 then pay \$15

5. The temperature in Dauphin is -5°C . The temperature in Brandon is -11°C . What is the difference in temperature between Dauphin and Brandon?

6. Evaluate.

- a. $(-8) - (+3) - (-4)$
b. $(+9) - (-5) - (+6)$
c. $(-5) - (+4) + (+2)$
d. $(-8) - (-2) + (+6)$
e. $(-7) - (-2) + (+8)$
f. $(-3) - (+6) - (+5) - (-6)$

Use the number for each letter. Make a true mathematical statement for the word.



For example:

T R Y T H I S
 $(+7) (+5) (+12)$ $(+7) (-5) (-4) (+6)$
 $T + R = Y$ $T + H = I + S$

- a. MAY b. GAS c. LET
d. FAR e. HOUR f. INCH
g. ANGLE h. EIGHT i. MATCH
j. $M + A + K + E + U + P +$
 $S + O + M + E = M + O - R + E$

Try This