The National Orthodox School Shmaisani

Mathematics worksheet (1) 6-F

Negative numbers + order of operations

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Negative numbers.

Adding and subtracting negative numbers.

Remember:

In **adding** and **subtracting** negative numbers, remember that:

- **Same** signs ⇨ **add** the numbers and put the **common** sign.
  Example: -2 + -4 = -6
- **Different** signs ⇨ **subtract** the numbers and the **sign** of the **answer** is according to the **sign** of the **bigger** number.
  Example: -8 + 5 = -3 ↔ 5 - 8 = -3
- When you have **two negative** signs (- -) ⇨ **turn** the sign to **positive** (+).

Example: (4 – – 6 it will be 4 + 6 = 10)

Exercise (1): Work out.

a) -6 + 8 = 2

b) -25 - 5 = -30

c) -8 + (-9) = -17

d) -15 – – 15 = 0 (– – → +, 0)

e) -10 + 2 = -8

f) -56 + (-7) = -63

g) -3 + (-9) = -12

h) -11- 5 = -16

i) 17 – 30 = -13

j) -12 − − 3 = −9 (− − → +)

k) -6 − − 3 = −3 (− − → +)

l) 9 − 12 = −3

m) 13 − − 28 = 41 (− − → +)

n) -7 − 10 = −17

o) -20 + 30 = 10

Multiplying and dividing negative numbers.

Remember:

- if you have **same** signs (+ +) or (- -) ⇨ The sign of the **answer** is **positive** (+)

  Example: - 2 × - 5 = 10

- If you have **different** signs (+ -) ⇨ The sign of the **answer** is **negative** (-)

  Example: -3 × 9 = 27

Exercise (2): Work out.

a) -8 x 7 = −56

b) -6 x (-2) = 12

c) 4 x (-3) = −12

d) 14 x (-7) = −98

e) -8 x (-3) = 24

f) -60 x 8 = −480

g) -10 x (-20) = 200

h) 13 x 4 = 52

i) -8 ÷ 2 = −4

j) 12÷ (-6) = −2

k) -10 ÷ 5 = −2

l) 20 ÷ (-4) = −5

m) -50 ÷ 5 = −10

n) -27 ÷ (-9) = 3

o) -120 ÷ 20= −6

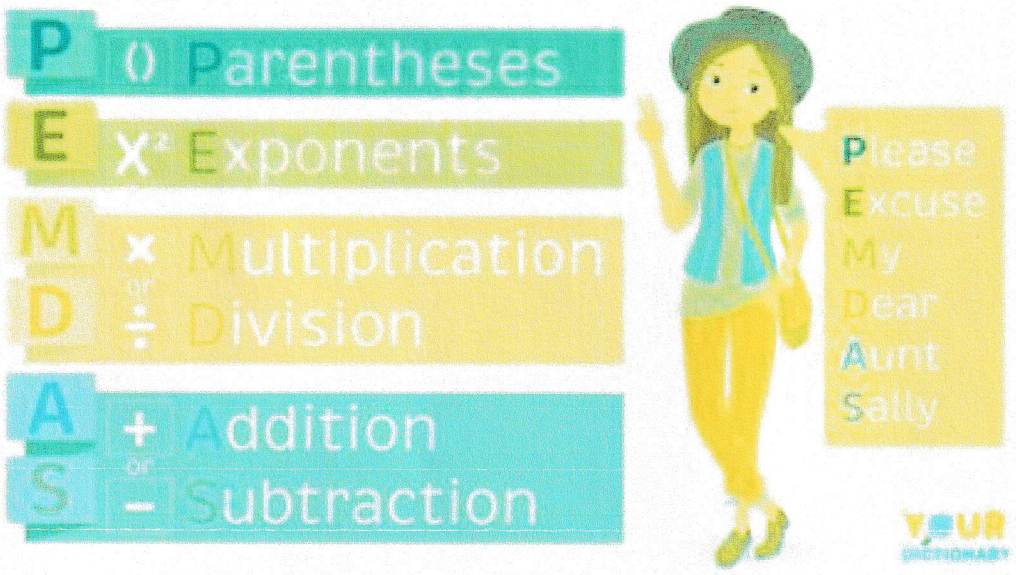
Mixed questions.

Exercise (3): Work out.

a) -10 + -9 = −19	b) 7 − −4 = 11 (− → +)
c) -13 + 6 = −7	d) 10 x (-6) = −60
e) -9 ÷ (-3) = 3	f) -35 ÷ 7 = −5
g) 19 − 9 = 10	h) -14 − 8 = −22
i) 42 ÷ (-6) = −7	j) -12 x (-4) = 48
k) 26 + (-8) = 18 (+ → −)	l) 7 + (-30) = −23
m) −14 − −13 = −1 (− → +)	n) -36 − 4 = −40
o) -5 x (-10) = 50	p) 9 x (-6) = −54
q) -48 ÷ 8 = −6	r) 21 ÷ (-3) = −7

Order of operations (BIDMAS rule).

Remember:



Exercise: Work out.

a) $4 + 2 \times 6 - 10$

$4+12-10$
$16-10=6$

b) $6 \times (9 - 10) + 7$

$6\times-1+7$
$-6+7=1$

c) $19 - 6 \div 2 \times 3$

$19-3\times3$
$19-9=10$

d) $6^2 - 7 \times 4 + (10 - 5)$

$6^2-7\times4+5$
$36-28+5$
$8+5=13$

e) $-2 \times 9 + -3 \times -7$

$-18+-3\times-7$
$-18+21=3$

f) $-12 + (36 \div 12) \times 3^3 - 20$

$-12+3\times3^3-20$
$-12+3\times27-20$
$-12+81-20$
$69-20=49$

Challenging question.

Workout.

$$-5-6\times(3+5)\div 12-7^2-4^3\div 8\times 12-35$$

$-5-6\times 8\div 12-7^2-4^3\div 8\times 12-35$

$-5-6\times 8\div 12-49-4^3\div 8\times 12-35$

$-5-6\times 8\div 12-49-64\div 8\times 12-35$

$-5-48\div 12-49-64\div 8\times 12-35$

$-5-4-49-64\div 8\times 12-35$

$-5-4-49-8\times 12-35$

$-5-4-49-96-35$

$-9-49-96-35$

$-58-96-35$

$-154-35=-189$