

# Directed Numbers

No Calculators!

Have a go at these and compare answers with your neighbours. Can you remember any 'rules' which might be helpful?

Question 1:  $5 - 2 = 3$

Question 3:  $-4 + 6 = 2$

Question 5:  $17 - 20 = -3$

Question 7:  $-3 \times 4 = -12$

Question 9:  $20 \div -5 = -4$

Rules?

Two Signs Together

$$++ \Rightarrow + \quad +- \Rightarrow -$$

$$-+ \Rightarrow - \quad -- \Rightarrow +$$

e.g.  $7 - - 10 = 7 + 10 = 17$

Question 2:  $-3 - 7 = -10$

Question 4:  $7 - - 2 = 9$

Question 6:  $5 \times -2 = -10$

Question 8:  $-7 \times -4 = 28$

Question 10:  $-6 \div -2 = 3$

Multiply (and Divide)

$$+ \times + = + \quad + \times - = -$$

$$- \times + = - \quad - \times - = +$$

e.g.  $-7 \times -10 = +70$

More questions

Question 11:  $-7 + 5 = -2$

Question 13:  $-7 - 4 = -11$

Question 15:  $-118 + 43 = -75$

Question 17:  $2 \times -7 = -14$

Question 19:  $-12 \div 6 = -2$

Question 12:  $8 - - 10 = 18$

Question 14:  $-5 - - 8 = 3$

Question 16:  $-7 \times -8 = 56$

Question 18:  $-15 \times 3 = -45$

Question 20:  $-18 \div -3 = 6$

Extra Questions

Question 21:  $2.7 - 7.2 = -4.5$

Question 23:  $-3.1 - 4.6 - 5 = -12.7$

Question 25:  $-2 \times -6.9 = 13.8$

Question 27:  $4.8 \div -1.6 = -3$

Question 29:  $6 + 8 \div 2 - 3 \times -5 = 25$

Question 22:  $-8 - - 17 = 9$

Question 24:  $-443 + 17 - 63 = -489$

Question 26:  $-3 \times -5 \times -2 = -30$

Question 28:  $3 \times -12 \div 4 = -9$

Question 30:  $-1.8 - - 6.8 \div -2 = -5.2$

Challenge:  $12 \div 4 \div 2 \times 3 = 4.5$  ? Also try putting in brackets?

With brackets:

$$(12 \div 4) \div (2 \times 3) = 3 \div 6 = \frac{1}{2}$$

$$12 \div (4 \div 2) \times 3 = 12 \div 2 \times 3 = 6 \times 3 = 18$$

$$(12 \div 4 \div 2) \times 3 = 1\frac{1}{2} \times 3 = 4\frac{1}{2}$$

Are there any more possibilities?

e.g.  $12 \div (4 \div 2 \times 3) = 12 \div 6 = 2$