

2.4: Multiplying positive and negative numbers

Things to remember from the video:

$\text{pos.} \times \text{pos.} = \text{pos.}$
 $\text{neg.} \times \text{neg.} = \text{pos.}$
 $\text{neg.} \times \text{pos.} = \text{neg.}$
 $\text{pos.} \times \text{neg.} = \text{neg.}$

$\text{anything} \times 0 = 0$
 $0 \div \# = 0$
 $\# \div 0 = \text{undefined!}$

Division

$\text{pos.} \div \text{pos.} = \text{pos.}$
 $\text{neg.} \div \text{neg.} = \text{pos.}$
 $\text{neg.} \div \text{pos.} = \text{neg.}$
 $\text{pos.} \div \text{neg.} = \text{neg.}$

Find each product:

1. $15(-4)$ -60	2. $-5(-2)(3)$ $10(3)$ 30	3. $-4(-y)(-7)$ $4y(-7)$ $-28y$
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4. $\frac{1}{2} \times (-18)$ (Hint: What is half of 18?) $9x$	5. $-7.5(-8)$ 7.5 $\times 8$ 600 60	6. $25(-4)(-2)$ $25(-2)(-4)$ $-5(4)$ 20
7. $28 \div -4$ -7	8. $-35 \div (-7)$ 5	9. $-24x \div 4$ $-6x$

10. A lake starts the summer with a maximum depth of 35 feet and changes at a typical rate of 3 feet per month. What will the depth of the lake be after three months? Explain your reasoning.

3 feet
 $\times 3 \text{ months}$
 9 feet

35 feet (starting)
 $- 9 \text{ feet (losing)}$
 26 feet

losing water