

SOL HW 1.4

September 29, 2016 10:27 PM

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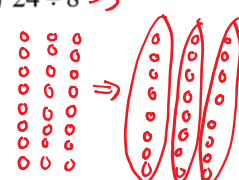
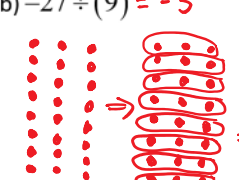
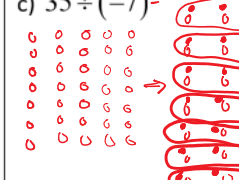
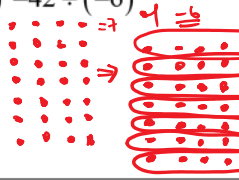
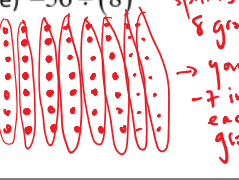
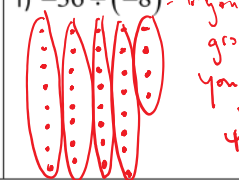
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Math 8 Homework: Section 1.4 Dividing Integers:

1. Divide the following without a calculator:

a) $100 \div 4$ $\frac{100}{4} = \frac{25 \times 4}{4} = 25$	b) $144 \div 36$ $\frac{144}{36} = \frac{12 \times 12}{12 \times 3} = 4 //$	c) $51 \div 17$ $\frac{51}{17} = \frac{3 \times 17}{17} = 3$	d) $216 \div 9$ $\frac{216}{9} = \frac{36 \times 6}{9} = 24$
e) $176 \div 8$ $8 \overline{)176} \Rightarrow \frac{176}{8} = 22$	f) $124 \div 4$ $4 \overline{)124} \Rightarrow \frac{124}{4} = 31$	g) $1243 \div 11$ $11 \overline{)1243} \Rightarrow \frac{1243}{11} = 113$	h) $255 \div 15$ $15 \overline{)255} \Rightarrow \frac{255}{15} = 17$

2. Divide the following by drawing counters:

a) $24 \div 8 = 3$  Divided into groups of 8. \Rightarrow So there are 3 groups.	b) $-27 \div (9) = -3$  Divided into 9 groups. \Rightarrow 3 in each group.	c) $35 \div (-7) = -5$  You want to remove all 35 in 7 groups. So you place -5 in each group.
d) $-42 \div (-6) = 7$  Divide the -42 into groups of 6. You get 7 groups.	e) $-56 \div (8) = -7$  Split -56 into 8 groups. You get -7 in each group.	f) $-36 \div (-8) = 4.5$  You split -36 into groups of -8. You end up with 4.5 groups.

3. Evaluate the following expressions without a calculator:

a) $24 + 32 \div 8$ $24 + \frac{32}{8} = 24 + 4 = 28$	b) $75 \div 5 - 20$ $\frac{75}{5} - 20 = 15 - 20 = -5$	c) $100 - 24 \div 6$ $100 - \frac{24}{6} = 100 - 4 = 96$
d) $-30 - 18 \div (-6)$ $-30 - \frac{18}{-6} = -30 - (-3) = -30 + 3 = -27$	e) $(15 + 42 - 25) \div 8$ $\frac{15 + 42 - 25}{8} = \frac{32}{8} = 4 //$	f) $-24 \div 4 + 40 \div (-8)$ $\frac{-24}{4} + \frac{40}{-8} = -6 - 5 = -11 //$
g) $64 \div (-16) - 81 \div (-3)$ $\frac{64}{-16} - \frac{81}{-3} = -4 - (-27) = -4 + 27 = 23 //$	h) $1 + (12 + 32 \div 8)$ $1 + (12 + \frac{32}{8}) = 1 + (12 + 4) = 17 //$	i) $100 \div (-2) \div (-5) \div 2$ $\frac{100}{-2} \div (-5) \div 2 = \frac{100}{(-2)(-5)(2)} = \frac{100}{20} = 5 //$

4. If the area of a rectangle is 96m^2 and the length is 24m long, then how long is the width?

$$\begin{aligned} \text{length} \times \text{width} &= \text{Area} \\ 24 \times w &= 96\text{m}^2 \\ w &= \frac{96}{24} = \frac{\cancel{24} \times \cancel{32}}{\cancel{24} \times 8} = 4\text{m} \end{aligned}$$

5. A 56.4Mb song is being downloaded through wifi at a rate of 1.2Mb per minute. How many minutes will it take to download the entire song?

$$\# \text{ of minutes} = \frac{56.4}{1.2} = 47 \text{ minutes}$$

$$\begin{array}{r} 47 \\ 12 \overline{) 564} \\ \underline{48} \\ 84 \\ \underline{84} \\ 0 \end{array}$$

6. Sarah wants to buy a laptop computer that costs $\$2875.00$. She is currently working at McDonalds and saving $\$125$ each week. How many weeks will it take her to save enough to buy the computer?

$$\# \text{ of weeks} = \frac{2875}{125} = 23 \text{ weeks.}$$

$$\begin{array}{r} 23 \\ 125 \overline{) 2875} \\ \underline{250} \\ 375 \\ \underline{375} \\ 0 \end{array}$$

7. A lollipop costs 35cents at the local grocery store. If John has $\$5.95$, how many lollipops can he purchase?

$$\# \text{ of lollipops} = \frac{5.95}{0.35} = 17 \text{ lollipops.}$$

$$\begin{array}{r} 17 \\ 35 \overline{) 595} \\ \underline{35} \\ 245 \end{array}$$

$$\begin{array}{r} 35 \\ \times 17 \\ \hline 245 \end{array}$$

8. A group of five students decided to pool all their candies and split them evenly amongst each other. Jack has 12 candies, Bob has 14, Tim has 22, Sandy has 18, and Kayla has 29. If we split them evenly, how many will each person have?

$$\begin{aligned} \text{Total} &= 12 + 14 + 22 + 18 + 29 \\ &= 40 + 36 + 29 \\ &= 105 \end{aligned}$$

$$\text{Average} = \frac{105}{5} = 21 \text{ candies each.}$$

9. Challenge: A snail is crawling up a 21meter long pole. Each day it manages to climb 6meters up. However, each night it will drop 2meters . How many days will it take the snail to get to the top?

