1. Evaluate each of the following. Where applicable, include a step to simplify by removing brackets before your final answer.

a) $-2 + (-10)$ b) $12 - (-3)$ c) $-4 - (+7) - (-9)$

d) $3(-6)(-5)$ e) $2(3)(-7)$ f) $36 \div (-4)$

g) $-48 \div (-8)$ h) $\left(\dfrac{-35}{7}\right) - \left(\dfrac{-16}{8}\right)$ i) $\left(\dfrac{-24}{3}\right) - \left(\dfrac{-42}{-6}\right)$

2. Evaluate.

a) $\left(\dfrac{3}{2}\right)^3$ b) $(-2)^4$ c) -5^2

d) $2^3 - 5 \times 3^2 + (6-10)^2$ e) $[-8-(-11)]^2 \times [-13+4]$

f) $6 + 18 \div 3 \times 4$ g) $\dfrac{(-4+1)[-7-(-7)]}{5-8}$

3. Evaluate each expression. Write your answers in lowest terms.

a) $\dfrac{3}{4} \times (-8) \times \left(\dfrac{-1}{12}\right)$ b) $\left(\dfrac{-3}{7}\right) \times \left(2\dfrac{2}{3}\right) \times \left(-1\dfrac{5}{9}\right)$
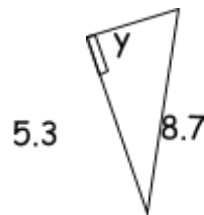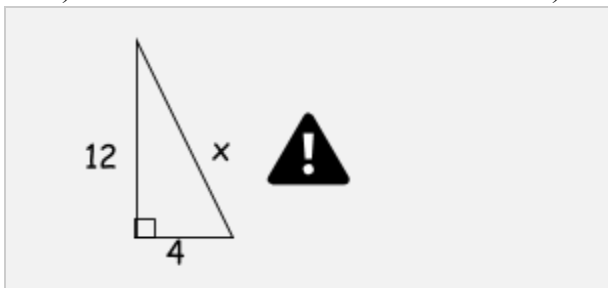
c) $\dfrac{1}{6} \div \left(1\dfrac{2}{3}\right)$ d) $\left(-1\dfrac{3}{5}\right) \div \left(-2\dfrac{2}{5}\right) \times \left(\dfrac{-5}{6}\right)$

e) $\dfrac{1}{4} - \left(\dfrac{-3}{4}\right)$ f) $\dfrac{5}{4} - \dfrac{3}{8} + \dfrac{1}{3}$ g) $\left(\dfrac{1}{4} + \dfrac{3}{8}\right) \div \left(\dfrac{1}{5} \div \dfrac{-1}{2}\right)$

h) $\dfrac{7}{9} + \left(\dfrac{-3}{4}\right)\left(\dfrac{2}{9}\right) \div \dfrac{3}{7}$

4. Solve each of the following for the missing variable. Show all of your work for full marks and round your answer to one decimal place.

a)   b)

5. A wheelchair ramp is 15 ft long. The ramp starts on the ground and by the time the wheelchair gets to the other end, it is 3.3 ft off the ground. What is the horizontal (ground) distance of the ramp? (Include a diagram in your solution.)

Answers:
1a) -12 , b)15, c)-2, d)90, e)-42, f)-9, g)6, h)-3, i)-15,   2a)9/4, b)16, c)-25, d)-21, e)-81, f)30, g)0, 3a)1/2, b)16/9, c)1/10, d)-5/9, e)1, f)29/24, g)-25/16, h)7/18,   4a)12.6, b)6.9,   5) 14.6