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Scientific Notation

$9870000.$

$= 9.87 \times 10^{6}$

124000000

$= 1.24 \times 10^{8}$

6.00015

$= 1.5 \times 10^{-4}$

E

1 a) $2m + 3m$ ...

$= 5m$

c) $-3w - 9w$

$= -12w$

2 a) $(3x + 2y) + (4x - 5y)$

$= 3x + 2y + 4x - 5y$

$= 3x + 4x + 2y - 5y$

$= 7x - 3y$

3 a) $2x - 3y$

$x = 3$
$y = -2$

$= 2(3) - 3(-2)$

$= 6 + 6$

$= 12$

Fractions

Example

$$\frac{1}{2} \Rightarrow \frac{2}{4} \Rightarrow \frac{4}{8}$$

$$\frac{1}{3} \Rightarrow \frac{2}{6} \Rightarrow \frac{4}{12}$$

$$\frac{50}{10} \overset{\div 5}{\underset{\div 5}{}} = \frac{10}{2}$$

$$\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$$

4 E) $x = -\frac{1}{2}$, $y = \frac{3}{4}$

a) $2x + 3y$

$= 2\left(-\frac{1}{2}\right) + 3\left(\frac{3}{4}\right)$ $\left\{ \quad 3 = \frac{3}{1} \right.$
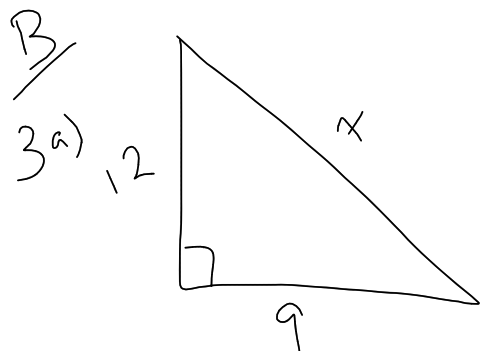
$= \frac{2}{1}\left(-\frac{1}{2}\right) + \frac{3}{1}\left(\frac{3}{4}\right)$

$= -\frac{2}{2} \quad + \frac{9}{4}$
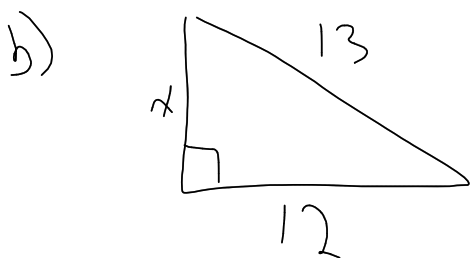
$= -\frac{4}{4} + \frac{9}{4}$

$= \frac{5}{4}$

B/

3a) 12

x

9

$$x^2 = 12^2 + 9^2$$

$$\vdots$$

$$x =$$

b)

x

13

12

$$13^2 = x^2 + 12^2$$

$$xy - \cdots$$

$$= \left(-\frac{1}{2}\right)\left(\frac{3}{4}\right) - \cdots$$

$$= -\frac{3}{8} - 5\left(\frac{3}{4}\right)$$

$$= -\frac{3}{8} - \frac{5}{1}\left(\frac{3}{4}\right)$$

$$= -\frac{3}{8} - \frac{15}{4}$$