Mathematics 9

Course Review (3)

Date:

1. Solve each of the following. Do a proper check for parts (c), (d) and (f)

   a) $3x-8=4$ b) $-x+6=2$ c) $2x-8=10-x$

   d) $6(x-2)=3x+2(x-1)$ e) $\frac{2x-1}{5}=3$ f) $\frac{x}{3}=\frac{x}{2}+7$

   g) $4(2x+1)=9-3(1-4x)$ h) $\frac{5x}{6}+\frac{1}{8}=\frac{x}{4}-\frac{1}{3}$ i) $\frac{x}{13}=\frac{3}{26}$

   j) $\frac{-5}{x}=-\frac{6}{5}$ k) $\frac{2}{14}=\frac{6}{15x}$ l) $\frac{1}{x}-\frac{3}{x}=\frac{4}{7}$

2. Is $x=2$ a solution to the equation $(x-2)^2+3(x-4)=3x-12$? Justify your answer.

3. If $x=5$ is a solution to the equation $2(x-3)+k(1+2x)=k-x-1$, determine the value of *k*.

4. Determine the point of intersection for the lines $y=3x+1$ and $y=\frac{1}{2}x-4$ intersect.

5. David earned four times as much as Mitchell. Together they earned a total of $120. How much did David earn?

6. Three houses are numbered with three consecutive EVEN numbers. If their sum is 186, what are the house numbers?

7. A bag contains 27 coins, all of which are either quarters or dimes. If their total value is $5.55, how many quarters and how many dimes are there?

8. The ages of Jon and Samantha total 27 years. In 4 years, Samantha's age plus twice Jon's age will be 43. What are Jon and Samantha's ages?

Answers:

1. a) 4 b) 4 c) 6 d) 10 e) 8 f) -42

   g) $-\frac{1}{2}$ h) $-\frac{11}{14}$ i) $\frac{3}{2}$ j) $\frac{25}{6}$ k) $\frac{14}{5}$ l) $-\frac{7}{2}$

3. -1 4. $(-2,-5)$ 5. Mitchell $24, David $96

6. 60, 62, 64 7. 8 dimes, 19 quarters 8. Samantha 23, Jon 4