

Evaluate the following. Circle your answer.

1. $3(5 - 3) - 2^2 + 8 =$	a) 10	b) 12
	c) 15	d) 20
2. $4 - \frac{10}{4+1} - (-10) =$	a) 10	b) 12
	c) 15	d) 20

Solve for x . Remember to plug your answer back into the original problem to see if it is correct.

3. $\frac{3x+3}{3} = 16$	a) 10	b) 12
	c) 15	d) 20
4. $5(x - 16) = x$	a) 10	b) 12
	c) 15	d) 20
5. $\frac{x^2}{4} = 25$	a) ± 10	b) 10
	c) -10	d) $\sqrt{-1}$
6. $\frac{\sqrt{x+3}}{4} = 1$	a) ± 13	b) -13
	c) 13	d) 20

7. What three consecutive even numbers add up to 726. Circle your answers. There will be 3 numbers.

8. Find all solutions to the following system of equations: $x + 2y = 4$ and $3x - y = 5$
Circle your 2 answers.

9. Break down 210 into its prime factors:

10. Fill in the blanks.

a. $\frac{0.25}{\quad} = \frac{\quad}{2} = \frac{1}{4} = \frac{\quad}{8} = \frac{3}{\quad} = \frac{\quad}{16} = \frac{5}{\quad}$

b. $\frac{\quad}{16/5} = \frac{2.5}{\quad} = \frac{5}{16} = \frac{10}{\quad} = \frac{\quad}{48} = \frac{20}{\quad} = \frac{\quad}{160}$

11. Evaluate these. [You may need to find common denominators.]

a. $\frac{1}{2} + \frac{4}{8} =$	b. $\frac{1}{3} + \frac{1}{4} + \frac{17}{12} =$
c. $\frac{3}{2} + \frac{1}{4} + 2 - \frac{3}{4} =$	d. $4 + \frac{4}{2} - \frac{8}{3} + \frac{8}{12} =$
e. $\frac{1}{1/5} =$	f. $\frac{3}{1/2} =$

12. You are at a nice restaurant and you are paying the bill. The service was good but not out of the ordinary so you want to tip 20%. The bill is \$225. What should you leave as a tip? [Hint: What is 10%? Just double it.]

13. Solve for x.

a. $\frac{12}{x-1} = 2$ [Hint: Start out by cross-multiplying. $2 = 2/1$.]	b. $\frac{6}{5x} - \frac{1}{2x} = \frac{7}{10}$ [Hint: you may want to cross-multiply.]
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14. Factor out the Greatest Common Factor.

a) $4x^2 - 2xy - 8 =$	a) $12x + 24y =$
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15. Factor these quadratics into the form $(x \pm a)(x \pm b)$.

a) $x^2 + 6x + 9 =$	b) $x^2 - 16 =$
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Answers to Sample Quiz:

1. a	2. b	3. c	4. d	5. a	6. c
7. 240, 242, 244	8. (2, 1)	9. (2)(3)(5)(7)			

10.

a. $\frac{0.25}{1} = \frac{0.5}{2} = \frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{5}{20}$

b. $\frac{1}{16/5} = \frac{2.5}{8} = \frac{5}{16} = \frac{10}{32} = \frac{15}{48} = \frac{20}{64} = \frac{50}{160}$

11. a-f answers are 1, 2, 3, 4, 5, 6

12. \$45.00

13a. $x = 7$ 13b. $x = 1$

14a. $2(2x^2 - xy - 4)$

14b. $12(x + 2y)$

15a. $(x + 3)^2$

15b. $(x + 4)(x - 4)$