

Alg/Geo 1 Semester 1 Midterm Exam Review

Chapter 3

Evaluate the following:

$3a + 5b$ when $a = -1, b = 2$ 7	$4r + \frac{21}{s}$ when $r = 7, s = -7$ 25	$-(g - 2h)$ when $g = 1, h = -1$ -3
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Simplify by combining like terms

$-5n + 3(6 + 7n)$ $11n + 18$	$-2n - (9 - 10n)$ $8n - 9$	$-9(6m - 3) + 6(1 + 4m)$ $-30m + 33$	$-7(n + 3) - 8(1 + 8n)$ $-71n - 29$
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Solve the equations:

$h - 15 = -22$ $h = -7$	$\frac{g}{-12} = 11$ $g = -132$	$-16h = 112$ $h = -7$
$\frac{3}{2}x + \frac{1}{5} = \frac{3}{4}$ $x = \frac{11}{30}$ or $3.\overline{6}$	$\frac{1}{2}(4 - k) = \frac{2}{5}$ $k = \frac{16}{5}$ or 3.2	$\frac{3}{4} + x = \frac{5}{6} - \frac{1}{2}x$ $x = \frac{1}{18}$ or $0.\overline{05}$

$4x + 7 - 6x = 5 - 4x + 4$ $x = 1$	$\frac{5x + 6}{4} = 3x - 2$ $x = 2$	$3(5x - 2) + 4x = 9x + 6 - 2x$ $x = 1$
$5(2x + 3) = 3(4x + 1) - 2(3x + 2)$ $x = -4$	$\frac{b - 1}{2} = b$ $b = -1$	$-5(2 - w) = 10$ $w = 4$
$a - 2 = \frac{a}{3}$ $a = 3$	$3x + 7 = -11 + 2x$ $x = -18$	$10 - 3k = -5k$ $k = 5$
$2(3x - 6) = 3(2x - 4)$ All real #s	$6p + 1 = 3(2p + 1)$ No solution	$17 - 20x = 4(-13 - 5x)$ No solution

The height of a plant is 8 more inches than twice the height of the plant last month. The plant is 32 inches this month. Write an equation to find the height of the plant last month and find the height.

12 inches

Adam ordered four CDs, each costing the same price. The cost of his total order was \$67, which included \$3 shipping charge. How much did each CD cost? Write an equation and solve.

\$16

Overstock.com sells a particular drinking glass for \$3.25. Each order at Overstock.com ships for a flat rate of \$2.95 no matter how many items are ordered. If Grace's total bill is \$41.95, how many drinking glasses did she order? Write an equation and solve.

12 glasses

Find two consecutive integers whose sum is 45 22, 23	Find two consecutive even integers whose sum is 26. 12, 14
Find three consecutive odd integers whose sum is 87 27, 29, 31	Find four consecutive even integers whose sum is -100 -28, -26, -24, -22

The length of a rectangle is 5 inches more than its width. The perimeter is 66 inches. Find the dimensions of the rectangle.

$$\begin{aligned}\text{width} &= 14 \\ \text{length} &= 19\end{aligned}$$

The length of a rectangle is 6 feet longer than twice the width. The perimeter is 228 feet. Find the dimensions of the rectangle.

$$\begin{aligned}\text{width} &= 36 \\ \text{length} &= 78\end{aligned}$$

The length of a rectangle 7 yards less than twice its width. The perimeter is 146 yards. Find the dimensions of the rectangle.

$$\begin{aligned}\text{width} &= 26.\overline{6} \\ \text{length} &= 46.\overline{3}\end{aligned}$$

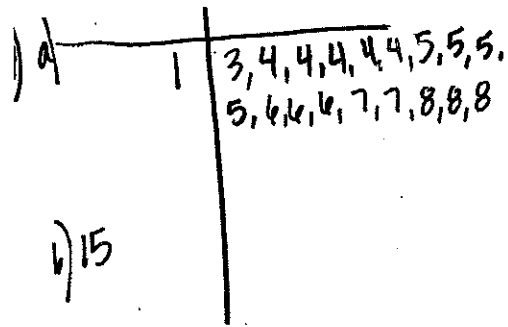
The length of a rectangle 3 inches less than its width. The perimeter is 130 inches. Find the dimensions of the rectangle.

$$\begin{aligned}\text{width} &= 34 \\ \text{length} &= 31\end{aligned}$$

1.) mean = 39.375
med = 38
mode = 35

2.) mean = 0.943
med = 0.9
mode = none

3.) mean = 6.3
med = 6
mode = 5, 8



4.) min = 59
max = 70
Q1 = 63
Q2 = 66
Q3 = 69

5.) min = 1
max = 10
Q1 = 3.5
Q2 = 6
Q3 = 8

6.) a. min = 15
max = 33
Q1 = 16
Q2 = 21
Q3 = 30

b) 2, 33

c) med = 21
mean = 23

GCF

2.) 7

4.) 17

6.) 5

8.) 9

10.) 28

12.) 4

LCM

14.) 42

16.) 72

18.) 756

20.) 900

22.) 84

24.) 252

Fractions

8) 32

10) 3

18) YES

20) NO

14) $\frac{1}{2}$

6) $\frac{2}{3}$

8) $\frac{3}{10}$

0) $\frac{1}{4}$

Multiply

2) $\frac{4}{7}$

4) 38

6) $33\frac{3}{4}$

3) $49\frac{5}{6}$

0) $13\frac{7}{8}$

16) $1\frac{1}{5}$

18) $\frac{5}{7}$

11) $13\frac{1}{3}$

22) $\frac{20}{27}$

Add/Subtract

2) $1\frac{1}{4}$

4) $1\frac{1}{3}$

6) $3\frac{11}{14}$

8) $6\frac{22}{35}$

17) $\frac{3}{5}$

20) $\frac{1}{11}$

21) $2\frac{3}{8}$

24) $7\frac{11}{12}$