

# Beginning Algebra

## Exam 1 Review 2

#1 To which of the following sets does  $-4$  belong? (Circle all that apply.)

## Integers

## Rationals

## Irrationals

## Real Numbers

#2 To which of the following sets does  $\sqrt{7}$  belong? (Circle all that apply.)

## Integers

## Rationals

## Irrationals

## Real Numbers

#3 To which of the following sets does  $\frac{1}{3}$  belong? (Circle all that apply.)

## Integers

## Rationals

## Irrationals

## Real Numbers

For problems 4 – 10, evaluate the following expressions. Write your answer in simplest form.

#4  $(-3)(-6) \div 2$   $\left(\frac{-1}{4}\right)\left(\frac{3}{2}\right)$

#5       $(-10) - 2$        $\frac{5}{8} - \frac{1}{2}$

#6       $(-16) + (-5)$        $\frac{9}{12} + \frac{1}{4}$

#7  $\left(\frac{-2}{3}\right)2$   $\frac{1}{4} + \frac{1}{2}$

#8	$-6^2 \div 4$	$(-2)^3$
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#9  $\left(\frac{2}{3}\right)^2$  | -17 |

#10      $2 \cdot |4 - 6|$       $6(2 - 4)$

#11 Two students evaluate the expression  $16 \div 4 \cdot 2$  and get different answers. One student got 8 as the answer while the other student wrote 2 as the answer. Which of the answers is correct and why?

Multiply to clear parentheses as necessary and simplify the following expressions.

#12  $-2(3 - x) + 10x$

#13  $2(x - 3) - (6 + x)$

#14  $\frac{1}{2}(4 - 6x) - 5$

#15 To which of the following sets does  $\frac{-1}{2}$  belong? (Circle all that apply.)

Integers                      Rationals                      Irrationals                      Real Numbers

#16 To which of the following sets does  $\sqrt{5}$  belong? (Circle all that apply.)

Integers                      Rationals                      Irrationals                      Real Numbers

#17 To which of the following sets does  $-3$  belong? (Circle all that apply.)

Integers                      Rationals                      Irrationals                      Real Numbers

#18      $-3(8) \div 2$       $\left(\frac{-1}{4}\right)\left(\frac{6}{5}\right)$

$$\#19 \quad (-24) - 12 \qquad \frac{5}{16} - \frac{1}{4}$$

#20  $(-17) + (-8)$   $\frac{8}{12} + \frac{5}{3}$

#21      $\frac{-2}{3} + 2$                        $\frac{2}{5} + \frac{1}{2}$

#22  $(-6)^2 \div 4$   $-4^2$

#23  $\left(\frac{3}{4}\right)^2$  | -4 |

#24       $(-2) | 4 - 6 |$        $6(4 - 2)$

#25 Two students evaluate the expression  $16 \div 4 \cdot 2$  and get different answers. One student got 8 as the answer while the other student wrote 2 as the answer. Which of the answers is correct and why?

Multiply to clear parentheses as necessary and simplify the following expressions.

#26  $-2(4x + 3) + 10x$

#27  $5(x - 3) + 2(6 + x)$

#28  $\frac{1}{2}(4 - 6x) - 5$