

1.2 - Solving Equations and Inequalities

Date _____ Period _____

Solve each equation.

1) $-3x - x = -24$

2) $-5x - 2x = 14$

3) $-2 = -3x + 4x$

4) $7 = -6n + 7n$

5) $7(7 - 7m) = 343$

6) $-1 + 4(4n + 3) = -101$

7) $2(1 - 5p) = 82$

8) $285 = 5(7x + 1)$

9) $b + 7 = 5 + 8b - 8b$

10) $n + 3 = 2n + 8$

11) $7 + 2(3p + 4) = -6p - 21$

12) $-7(1 - k) - 4k = -8k + 15$

Solve each proportion.

13) $\frac{6}{x} = \frac{8}{7}$

14) $\frac{2}{a} = \frac{9}{3}$

$$15) \frac{8}{6} = \frac{n-2}{9}$$

$$16) \frac{10}{2} = \frac{8}{x+2}$$

$$17) \frac{4}{p+5} = \frac{3}{p}$$

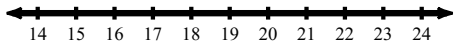
$$18) \frac{8}{3} = \frac{r-5}{r}$$

$$19) \frac{6}{r-3} = \frac{10}{r-4}$$

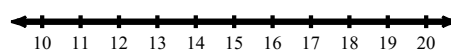
$$20) \frac{n-5}{n+1} = \frac{2}{6}$$

Solve each inequality and graph its solution.

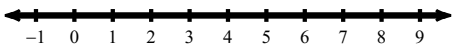
$$21) r + 1 \leq 17$$



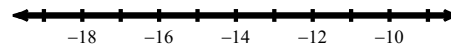
$$22) n + 20 > 32$$



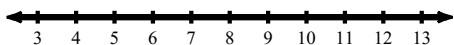
$$23) 15 - n \leq 9$$



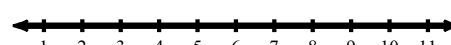
$$24) -7a \geq 84$$



$$25) 5 - 4(-4a + 8) \leq 85$$



$$26) -86 < -2(8 + 7k)$$



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Solve each equation.

1) $-3x - x = -24$

 $\{-6\}$

2) $-5x - 2x = 14$

 $\{-2\}$

3) $-2 = -3x + 4x$

 $\{-2\}$

4) $7 = -6n + 7n$

 $\{7\}$

5) $7(7 - 7m) = 343$

 $\{-6\}$

6) $-1 + 4(4n + 3) = -101$

 $\{-7\}$

7) $2(1 - 5p) = 82$

 $\{-8\}$

8) $285 = 5(7x + 1)$

 $\{8\}$

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 $\{-2\}$

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 $\{-5\}$

11) $7 + 2(3p + 4) = -6p - 21$

 $\{-3\}$

12) $-7(1 - k) - 4k = -8k + 15$

 $\{2\}$ **Solve each proportion.**

13) $\frac{6}{x} = \frac{8}{7}$

 $\{5.25\}$

14) $\frac{2}{a} = \frac{9}{3}$

 $\{0.66\}$

$$15) \frac{8}{6} = \frac{n-2}{9}$$

{14}

$$16) \frac{10}{2} = \frac{8}{x+2}$$

{-0.4}

$$17) \frac{4}{p+5} = \frac{3}{p}$$

{15}

$$18) \frac{8}{3} = \frac{r-5}{r}$$

{-3}

$$19) \frac{6}{r-3} = \frac{10}{r-4}$$

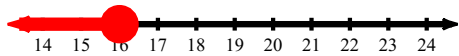
{1.5}

$$20) \frac{n-5}{n+1} = \frac{2}{6}$$

{8}

Solve each inequality and graph its solution.

$$21) r + 1 \leq 17$$



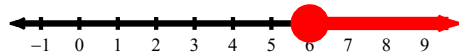
$r \leq 16$

$$22) n + 20 > 32$$



$n > 12$

$$23) 15 - n \leq 9$$



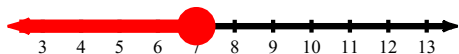
$n \geq 6$

$$24) -7a \geq 84$$



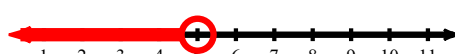
$a \leq -12$

$$25) 5 - 4(-4a + 8) \leq 85$$



$a \leq 7$

$$26) -86 < -2(8 + 7k)$$



$k < 5$