

11-3 Review for Test

Date _____ Period _____

Simplify each expression. Remember factoring and cancelling.

1)
$$\frac{(x+2)(x-8)}{(8-x)(7+x)} \cdot \frac{6x^2(x+7)}{x+2}$$

2)
$$\frac{7b^2}{7b^3 + 42b^2} \cdot \frac{b^2 + 12b + 36}{b+9}$$

3)
$$\frac{3b-6}{3b-9} \cdot \frac{1-b}{10b^2-10b}$$

4)
$$\frac{(x+6)(x-10)}{7} \div \frac{(x-10)(x+6)}{7(x+6)}$$

5)
$$\frac{n-10}{n^2-n-56} \div \frac{8n}{n^2-n-56}$$

6)
$$\frac{4}{2p^3-18p^2} \div \frac{5p^2-30p}{p^2-15p+54}$$

Simplify each expression. Remember to get a like denominator to add or subtract fractions.

7)
$$\frac{4x+5}{x^2+10x+24} + 3$$

8)
$$\frac{x+3}{3x-18} - \frac{5x}{2}$$

9)
$$\frac{3n}{n+2} - \frac{3}{n+6}$$

10)
$$\frac{6}{4b} - \frac{3}{b-5}$$

11)
$$\frac{6}{n-4} - \frac{2}{n+4}$$

12)
$$\frac{r+4}{5} - \frac{2r}{r-1}$$

Simplify.

13) $8\sqrt[4]{48r^5}$

14) $-\sqrt{16k^3}$

15) $5\sqrt{75x^2}$

16) $2\sqrt[4]{486m^4}$

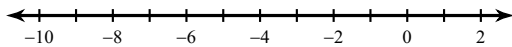
Solve each equation.

17) $|-10k + 5| = 25$

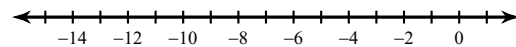
18) $-1 + 2|7 + x| = 7$

Solve each inequality and graph its solution.

19) $8|5x + 4| \leq 88$



20) $|-m - 6| + 8 > 12$



Factor each completely.

21) $5a^2 - 45a + 40$

22) $3x^2 - 5x$

23) $25m^2 - 1$

24) $8x^3 + 125$

Answers to 11-3 Review for Test (ID: 1)

1) $-6x^2$

2) $\frac{b+6}{b+9}$

3) $\frac{-b+2}{10b(b-3)}$

4) $x+6$

5) $\frac{n-10}{8n}$

6) $\frac{2}{5p^3}$

7) $\frac{3x^2+34x+77}{(x+6)(x+4)}$

8) $\frac{92x+6-15x^2}{6(x-6)}$

9) $\frac{3n^2+15n-6}{(n+6)(n+2)}$

10) $\frac{-3b-15}{2b(b-5)}$

11) $\frac{4n+32}{(n-4)(n+4)}$

12) $\frac{r^2-7r-4}{5(r-1)}$

13) $16r\sqrt[4]{3r}$

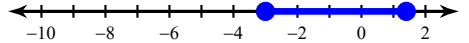
14) $-4k\sqrt{k}$

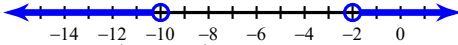
15) $25x\sqrt{3}$

16) $6m\sqrt[4]{6}$

17) $\{-2, 3\}$

18) $\{-3, -11\}$

19) $-3 \leq x \leq \frac{7}{5}$: 

20) $m < -10$ or $m > -2$: 

21) $5(a-8)(a-1)$

22) $x(3x-5)$

23) $(5m+1)(5m-1)$

24) $(2x+5)(4x^2-10x+25)$