

Answers for Exam 3 Review Practice Problems

Chapter 3:

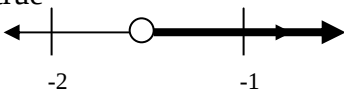
- 21) 4 hr.
22) 8% juice: 10 L; 15% juice: 4 L

Chapter 4:

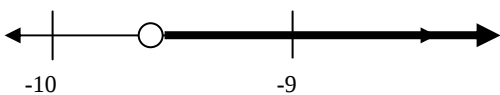
3) true

6) true

7) true

16)  $\{x \mid x > -\frac{3}{2}\}$ $\left(-\frac{3}{2}, \infty\right)$

The number line shows a horizontal line with arrows at both ends. There is an open circle at -1.5 (labeled as -3/2) and a tick mark at -2. The line is shaded to the right of the open circle.

18)  $\left\{y \mid y > -\frac{220}{23}\right\}$ $\left(-\frac{220}{23}, \infty\right)$

The number line shows a horizontal line with arrows at both ends. There is an open circle at -220/23 (approximately -9.56) and tick marks at -10 and -9. The line is shaded to the right of the open circle.

19)  $\left\{x \mid x \leq -\frac{5}{2}\right\}$ $\left(-\infty, -\frac{5}{2}\right]$

The number line shows a horizontal line with arrows at both ends. There is a closed circle at -5/2 (labeled as -5/2) and the line is shaded to the left of the closed circle.

21) more than 125 hours

22) at most \$3000

38) $\{-4, 10\}$

39) $\left(-\frac{17}{2}, \frac{7}{2}\right)$

40) $\left(-\infty, -\frac{11}{3}\right] \cup \left[\frac{19}{3}, \infty\right)$

42) no solution

43) $[-16, 8]$

44) $(-\infty, 0) \cup (10, \infty)$

Chapter 5:

1) $g \quad 8x^3 - 4x^2 + 12x + 14$

2) $e \quad 9 - t^2$

3) $j \quad 4a^2 - 12a + 9$

10) d prime

11) degrees of terms: 7, 11, 3, 0 degree of polynomial: 11

12) $-5x^3 + 2x^2 + 3x + 9; -5x^3; -5$

14) $P(0) = 0 \quad P(-1) = -6$

17) $-x^2y - 2xy^2$

- 19) $-3x^4 + 3x^3 - x + 16$
 23) $6x^2 - 7xy + 3y^2$
 24) $-18x^3y^4$
 26) $8a^2b^2 + 2abc - 3c^2$
 27) $4x^2 - 25y^2$
 28) $9x^2 - 24xy + 16y^2$
 29) $2x^2 + 5x - 3$
 32) $x^2 - \frac{1}{2}x + \frac{1}{18}$
 34) $3y^2(3y^2 - 1)$
 36) $(a - 9)(a - 3)$
 37) $(3m + 2)(m + 4)$
 38) $(5x + 2)^2$
 39) $4(y + 2)(y - 2)$
 40) $x(x + 7)(x - 2)$
 43) $(a^2 + 9)(a + 3)(a - 3)$
 47) $y(y^4 + 1)$
 50) $4(3x - 5)^2$
 51) $(2t + 5p)(3t + p)$
 54) $\{8\}$
 56) $\left\{0, \frac{7}{4}\right\}$
 57) $\{-4, 4\}$
 58) $\{-3, 0, 7\}$
 59) $\{-1, 6\}$
 62) side is 5 units
 63) $-7, -5, -3$ or $3, 5, 7$
 64) width: 5 in.; length: 8 in.

Chapter 6 (review):

- 2) false
 11) (a) $-\frac{2}{9}$ (b) $-\frac{3}{4}$ (c) 0
 12) LCD = $48x^3$
 13) LCD = $(x + 5)(x - 4)(x - 2)$
 14) $x + 3$
 15) $\frac{b^2c^6d^2}{a^5}$

$$19) \quad \frac{x-3}{(x+3)(x+1)}$$

$$20) \quad \frac{x-y}{x+y}$$

$$21) \quad 2(x+y)$$

$$22) \quad \frac{-y}{(y+4)(y-1)}$$

Chapter 6 (test)

$$1) \quad \frac{3}{4(t-1)}$$

$$3) \quad (x-3)(x+8)(x-9)$$