Part 1: Integrated Math 1 Review

Directions: Solve each of the following equations.

1) $15 = 4 - 4x + 3$

2) $-9 = 2v + v$

3) $2v - 4(-4v + 1) = 104$

4) $132 = -6(3x - 1)$

5) $-k - 4 = 8(4k + 3) + 5$

6) $-5(-8 + 8x) - 8 = 32 + 2x$

7) $|a| = 5$

8) $|x| = 10$

9) $|-6r| = 60$

10) $\left|\frac{n}{6}\right| = 3$

11) $|-7m| + 4 = 11$

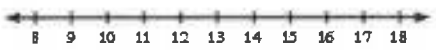
12) $-7|2m| = -98$

13) $|4m + 5| - 10 = -9$

14) $1 + |10n - 1| = 52$

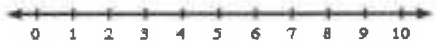
Directions: Solve each inequality and graph your solution.

15) $2 + 2k > 30$

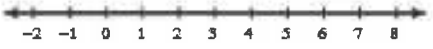


16) $-9(10 + x) > 54$

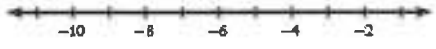
17) $-8x - 1 + 2 > -15$



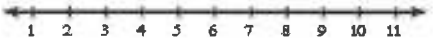
18) $-3x - 5x \leq -8$



19) $-190 \geq 5(-2 + 6n)$



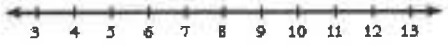
20) $154 \leq -2 - 4(1 - 8p)$



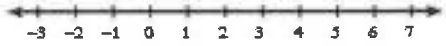
21) $35 - b < 8(b + 1)$

22) $-24 + 4x \leq 7(1 + 5x)$

23) $1 - 3r > -4 - 3r$



24) $a - 5 \leq -9 + a$



Directions: Simplify each expression using the properties of exponents.

25) $u^2v^4 \cdot u^{-4}v^3$

26) $x^3y^0 \cdot 4yx^3$

27) n^{-4}

28) $(4u^3v^0)^{-3}$

29) $\dfrac{4x^3y^0}{x^3}$

30) $\dfrac{2m^4n^2}{3m}$

Directions: Write the following equations in slope intercept form. Identify the slope and y-intercept for each. Then sketch a graph.

31) $5x - 3y = 12$

32) $4x - 5y = -20$

33) $x + y = -3$

34) $3x + y = 0$

Directions: Write an equation in slope intercept form for the line described.

35) through: $(-3, 5)$, slope $= -2$

36) through: $(0, -3)$, slope $= -6$

37) through: $(5, 0)$, parallel to $y = -\frac{1}{3}x + 5$

38) through: $(4, -1)$, parallel to $y = -\frac{5}{4}x - 2$

39) through: $(1, 0)$, perp. to $y = \frac{1}{5}x - 5$

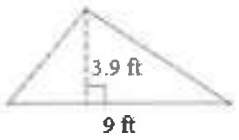
40) through: $(-4, -5)$, perp. to $y = -\frac{4}{7}x - 2$

Part 2: Integrated Math 2 Diagnostic

Attempt all the following problems. Remember this portion is for diagnostic purposes only and will not be graded.

Directions: Find the area and perimeter of each shape.

1)



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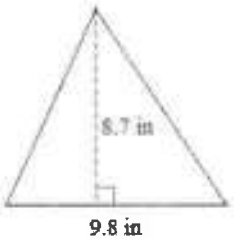

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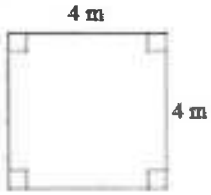

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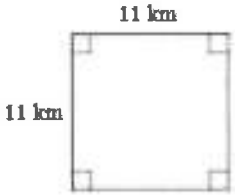

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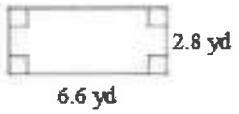

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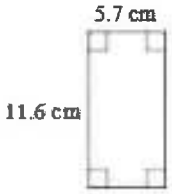

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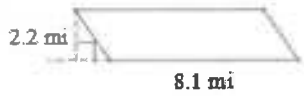

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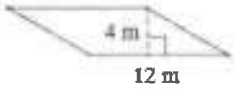

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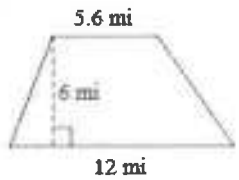

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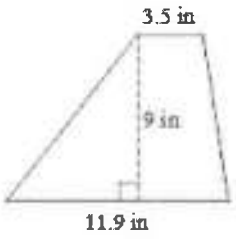


Directions: Solve each proportion.

11) $\frac{x}{9}=\frac{9}{3}$

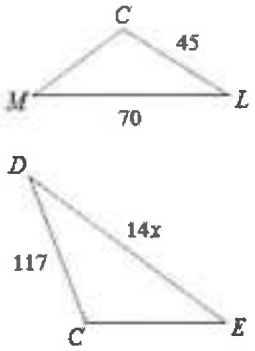
12) $\frac{3}{7}=\frac{7}{x}$

13) $\frac{v}{9}=\frac{8}{3}$

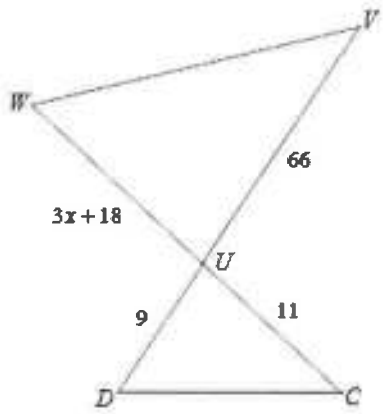
14) $\frac{8}{4}=\frac{b}{8}$

Directions: Solve for x. Assume the given pair of triangles are similar.

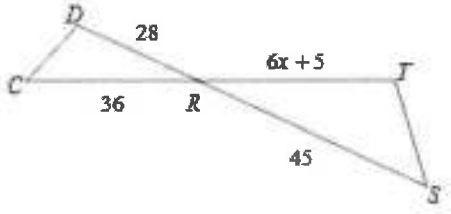
15) $\triangle CDE \sim \triangle CLM$



16) $\triangle UVW \sim \triangle UCD$



17) $\triangle RST \sim \triangle RCD$



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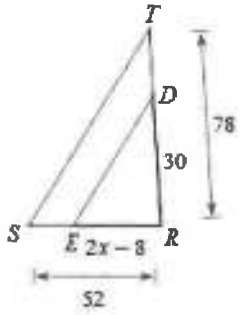
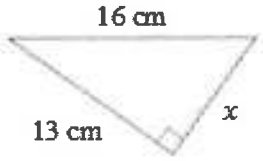


Directions: Find the missing side of each right triangle using the Pythagorean Theorem. Leave answers in simplest radical form or round to the nearest tenth.

19)



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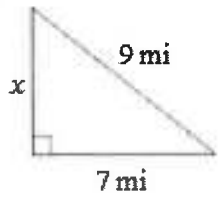

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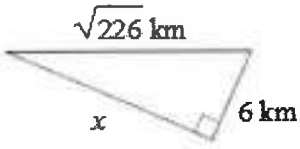

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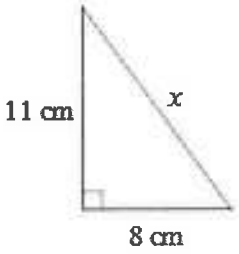

Directions: Simplify each of the following radical expressions to simplest form. **NO DECIMALS**.

23) $\sqrt{900}$

24) $\sqrt{32}$

25) $\sqrt{36}$

26) $\sqrt{8}$

27) $\sqrt{64}$

28) $\frac{4\sqrt{5}}{4\sqrt{4}}$

29) $\frac{\sqrt{8}}{4\sqrt{4}}$

30) $\frac{\sqrt{2}}{\sqrt{18}}$

31) $\frac{2\sqrt{15}}{5\sqrt{4}}$

Directions: Simplify each of the following polynomial expressions using the given operation.

32) $(5n^2 - 5n^3) + (3n^2 - 8n^3)$

33) $(7x + 5x^4) + (6x - 8x^4)$

34) $(1 + 8n^3 + 6n^4) + (2n^4 + 3 + 3n)$

35) $(x + 6x^2 - 8) + (8x^4 + 4x + 6x^2)$

36) $(7m - 4m^4) + (7m^4 + 6m - 8)$

37) $(5m^2 - m^4) + (m^3 + m^4 - 2m^2)$

38) $(5r^2 + 8r^3) - (5r^2 - r^3)$

39) $(6x^2 - 5x) - (2x^2 - 2x)$

40) $(6 + 6n^3) - (n^4 + 6 - 7n^3)$

41) $(8x^2 + 3x) - (5x^2 - 6x - 2x^3)$

42) $(8x - 4x^3 + 5x^4) - (3x^4 - 6x - 3x^3)$

43) $(3x^3 - 7x - 7) - (6 - 5x - 5x^3)$

44) $6(2b - 8)$

45) $4(8n - 4)$

46) $4x(5x + 3)$

47) $(6b + 1)(b + 4)$

48) $(5x - 5)(x + 6)$

49) $(4r + 4)(2r - 3)$

50) $(6x + 8)(x^2 - 5x + 4)$

51) $(7r + 8)(3r^2 - 2r + 2)$