

Unit 1 Review

Evaluate each expression.

1) $-3 - \frac{-2 + 5}{3}$

2) $3 + (4)(6) - 1$

Simplify the expression.

3) $\sqrt{120x^4y^3}$

4) $\sqrt{76x^2y}$

Simplify. Your answer should contain only positive exponents.

5) $4yx^4 \cdot 4y^2$

6) $m^3n^{-3} \cdot 3mn^4$

7) $(2u^2)^4 \cdot (u^4)^2$

8) $x^{-4}y^2 \cdot (yx^4)^{-1}$

9) $\frac{x}{4x^2y^{-4} \cdot x^3y^2}$

10) $\frac{xy^4}{2x^4 \cdot x^{-3}y^2}$

11) $\left(\frac{2n^{-3}}{2nm^2}\right)^3$

12) $\left(\frac{xy^{-4}}{2x^4y^4}\right)^{-3}$

Factor each completely.

13) $6b^3 - 102b^2 + 420b$

14) $x^2 + 7x - 30$

$$15) m^2 - 3m - 4$$

$$16) 5x^2 + 28x + 15 = 0$$

$$17) 3x^2 - 8x + 5 = 0$$

$$18) 2x^2 - 5x - 3 = 0$$

$$19) 7x^3 - 21x^2 - x + 3$$

$$20) 14a^3 - 21a^2 - 12a + 18$$

Solve each equation.

$$21) b^2 - 10b + 16 = 0$$

$$22) v^2 - 11v + 30 = 0$$

$$23) 6r^2 - 6r - 336 = 0$$

$$24) n^2 + 3n + 2 = 0$$

$$25) 2a^2 - 12a - 5 = 0$$

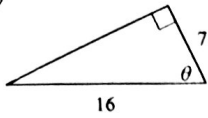
$$26) 5x^2 + 2x - 12 = 0$$

$$27) 4k^2 + 8k + 7 = 0$$

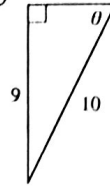
$$28) 5x^2 + 2x + 9 = 0$$

Find the value of the trig function indicated.

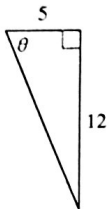
29) $\sin \theta$



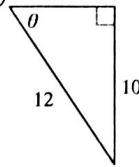
30) $\tan \theta$



31) $\cos \theta$

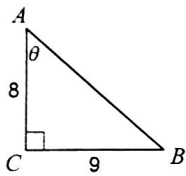


32) $\sin \theta$

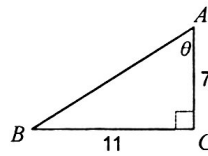


Find the measure of each angle indicated. Round to the nearest tenth.

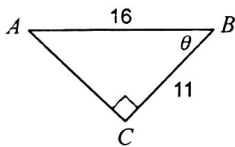
33)



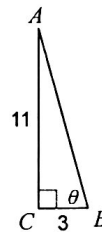
34)



35)

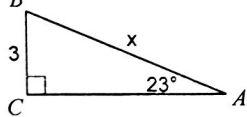


36)

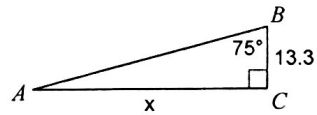


Find the measure of each side indicated. Round to the nearest tenth.

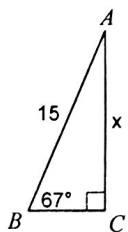
37)



38)



39)



40)

