

Bring your completed packet to the first class day.

If you are not sure how to do a problem, please look it up or ask a friend.

Evaluate the following function.

1) $h(x) = x^3 + 2x^2$; Find $h(-5)$

2) $f(x) = 4x - 3$; Find $f(1)$

Simplify. That means no radicals in denominator and no perfect roots under radical.

3) $\sqrt{40b^3}$

4) $\sqrt[3]{1000k^6}$

5) $7\sqrt[3]{256xy^6}$

6) $2\sqrt{27} - 3\sqrt{5} - 3\sqrt{45}$

7) $5\sqrt{3}(5 + \sqrt{6})$

8) $\frac{\sqrt{2}}{3\sqrt{5}}$

Simplify the following complex numbers.

9) $4(4 + i) + 8(-5i)$

10) $(-6 + 6i)(-3 + i)$

This expression is in radical form. Write this expression in exponential form.

11) $(\sqrt{k})^3$

This expression is in exponential form. Write this expression in radical form.

12) $(6v)^{\frac{2}{3}}$

Simplify. Your answer should contain only positive exponents.

13) $2x^2 \cdot (x^3y^3)^{-3}$

14) $(2xy^2 \cdot y^{-4})^4$

15) $\frac{2v^{-4}}{4uv^2 \cdot 4v}$

16) $4m^4n^{-1} \cdot 2m^4n^3$

Name each polynomial by degree and number of terms.

17) $-10m^2 - 3m$

18) $-7n^3 + 2n^2 - 3$

Simplify each expression.

19) $(8m + 5m^2 + 7) - (6m^2 - 5m^4 - 4)$

Find each product.

20) $(2x - 1)(2x^2 + x - 6)$

21) $(2m + 5)(4m - 8)$

22) $(8n + 5)(2n + 4)$

23) $(3x + 4)^2$

Factor each completely.

24) $5x^2 + 20x - 160$

25) $2x^2 - 25x + 50$

26) $4n^2 - 6n$

27) $9x^2 + x - 10$

28) $r^2 - 3r - 18$

29) $n^2 - 25$

30) $9n^3 - 3n^2 + 6n - 2$

31) $15x^3 + 9x^2 + 5x + 3$

Solve the following equation. You do not need to use logs to solve.

32) $\log(3p + 5) = \log(5p + 7)$

Solve each equation. You need to use your log properties here.

33) $\log 8 + \log x = 2$

34) $\log x - \log 3 = \log 3$

Solve each equation. You do not need to use logs to solve these.

35) $16^{-3n} = 4^3$

36) $3^{2x-3} = 3^{3-x}$

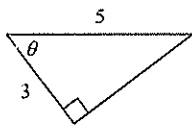
Use logs to solve each equation. Round your answers to the nearest ten-thousandth.

37) $5^{b+2} - 10 = 23$

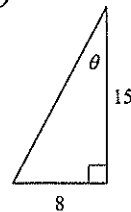
38) $17^{-2x} + 7 = 23$

Find the value of the trig function indicated. Think SOH-CAH-TOA from Geometry.

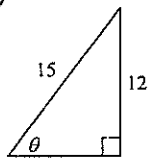
39) $\sin \theta$



40) $\tan \theta$

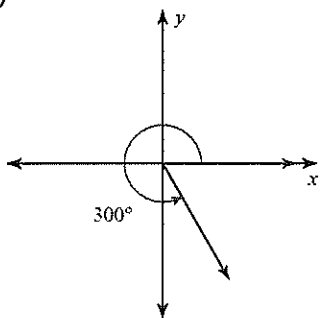


41) $\cos \theta$

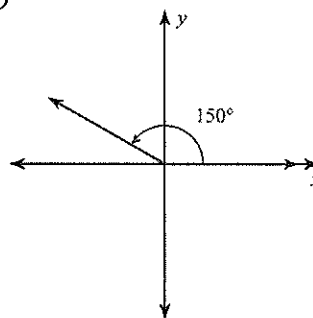


Find the exact value of each trigonometric function. Think Unit Circle from Algebra II.

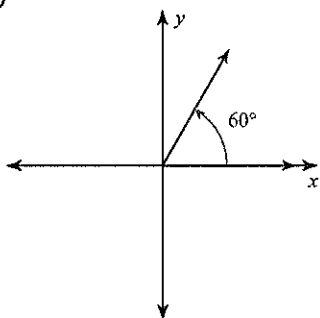
42) $\cos \theta$



43) $\tan \theta$

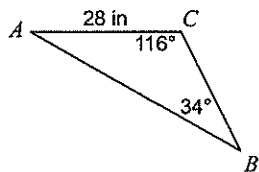


44) $\sin \theta$



Use Law of Sines to find each measurement indicated. Round your answers to the nearest tenth.

45) Find AB



46) Find $m\angle A$

