

Semester 1 Exam Practice - Part 1

Date _____ Period _____

Use the discriminant to determine the number of real solutions to each equation.

1) $2p^2 - 6 = 0$

2) $6x^2 - 9x + 3 = 0$

Solve each equation.

3) $n^2 - 5n + 2 = 0$

4) $m^2 - 5m - 5 = 0$

Evaluate each expression.

5) $((-2) - 2)^3 - (3)\frac{12}{-3}$

Evaluate.

6) $(3v^2 - 3v^3) + (3v^2 + 2v^3)$

7) $(7n + 7)(7n + 2)$

Factor each completely.

8) $9b^2 + 12b + 4$

Evaluate each function.

9) $h(x) = x^3 + 5x^2$; Find $h(n - 4)$

Find the exact value of each trigonometric function.

10) $\cos 300^\circ$

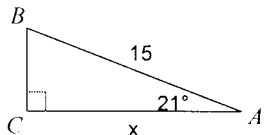
11) $\tan 135^\circ$

Find the approximate value of each trig. function. Round to nearest ten-thousandth.

12) $\tan 60^\circ$

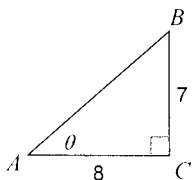
Find the measure of each side indicated. Round to the nearest tenth.

13)



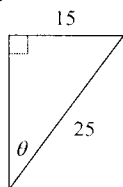
Find the measure of each angle indicated. Round to the nearest tenth.

14)

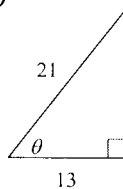


Find the value of the trig function indicated.

15) $\sin \theta$

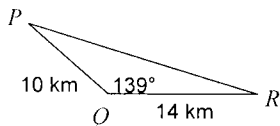


16) $\sin \theta$



Find the area of each triangle to the nearest tenth.

17)



Answers to Semester 1 Exam Practice - Part 1 (ID: 1)

1) Two

2) Two

$$3) \left\{ \frac{5 + \sqrt{17}}{2}, \frac{5 - \sqrt{17}}{2} \right\}$$

$$4) \left\{ \frac{5 + 3\sqrt{5}}{2}, \frac{5 - 3\sqrt{5}}{2} \right\}$$

5) -52

$$6) -v^3 + 6v^2$$

$$7) 49n^2 + 63n + 14$$

$$8) (3b + 2)^2$$

$$9) n^3 - 7n^2 + 8n + 16$$

$$10) \frac{1}{2}$$

11) -1

12) 1.7321

13) 14

14) 41.2°

$$15) \frac{3}{5}$$

$$16) \frac{4\sqrt{17}}{21}$$

17) 45.9 km^2