

Practice for Semester 1 Exam

Evaluate:

1) $\begin{vmatrix} -1 & -5 \\ 3 & -5 \end{vmatrix}$

2) $\begin{vmatrix} -4 & 4 \\ 3 & -2 \end{vmatrix}$

Simplify.

3) $\begin{bmatrix} 5 & -5 & -2 \\ -1 & 5 & 1 \end{bmatrix} \cdot \begin{bmatrix} -5 & 2 \\ -1 & 4 \\ -6 & 2 \end{bmatrix}$

4) $-2\sqrt{8} + 3\sqrt{6} + 3\sqrt{6}$

5) $(4 + \sqrt{5})(-2 - 2\sqrt{5})$

6) $\frac{7i}{2 - 7i}$

7) $\frac{yx^2}{2y^{-2}}$

8) $\sqrt{48xy^2}$

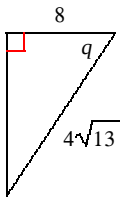
Solve each equation.

9) $\sqrt{\frac{n}{7}} = 1$

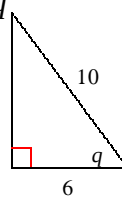
10) $k = \sqrt{-14 + 9k}$

Find the EXACT value of the trig function indicated.

11) $\sin q$



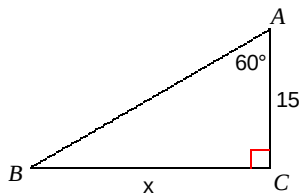
12) $\tan q$



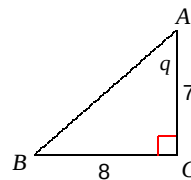
13) Find $\sin q$ if $\cos q = \frac{\sqrt{15}}{8}$

Find the measure of the side or angle indicated. Round to the nearest tenth.

14)



15)



Answers to Practice for Semester 1 Exam

1) 20

2) -4

3) $\begin{bmatrix} -8 & -14 \\ -6 & 20 \end{bmatrix}$

4) $-4\sqrt{2} + 6\sqrt{6}$

5) $-18 - 10\sqrt{5}$

6) $\frac{14i - 49}{53}$

7) $\frac{y^3x^2}{2}$

8) $4|y|\sqrt{3x}$

9) $\{7\}$

10) $\{2, 7\}$

11) $\frac{3\sqrt{13}}{13}$

12) $\frac{4}{3}$

13) $\frac{7}{8}$

14) 26

15) 48.8°