

Algebra Refresher

Solve for the variable

1) $\frac{5m-5}{3} = \frac{2m}{4}$

3) $\frac{3x-6}{x} = -\frac{2}{5}$

5) $b^2 = 8b - 2$

7) $m^2 - 19 = 6m$

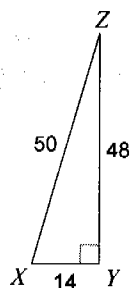
2) $\frac{v}{3} = \frac{v+5}{4}$

4) $\frac{3x+3}{4} = \frac{x}{6}$

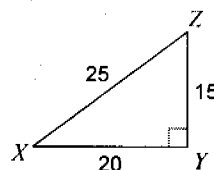
6) $m^2 + 2m = 8$

Find the appropriate trigonometric ratio

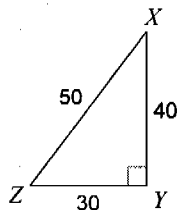
8) $\cos X$



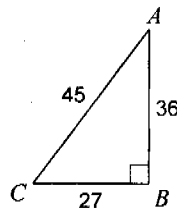
9) $\cos X$



10) $\sin Z$

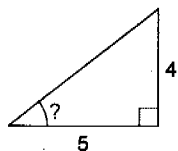


11) $\tan C$

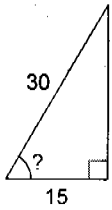


Determine the angle

12)



13)



Solve the system of equations

$$\begin{aligned} 15) \quad y &= x - 2 \\ y &= 9x + 6 \end{aligned}$$

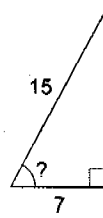
$$\begin{aligned} 17) \quad y &= \frac{5}{2}x - 8 \\ y &= \frac{2}{3}x + 3 \end{aligned}$$

Simplify

$$19) \frac{2y \cdot 2x^2y^2}{(x^4y^2)^4}$$

$$21) \left(\frac{a^0b^{-3}}{a^2 \cdot 2ba^4} \right)^4$$

14)



$$\begin{aligned} 16) \quad y &= \frac{1}{4}x + 4 \\ y &= \frac{9}{8}x - 3 \end{aligned}$$

$$\begin{aligned} 18) \quad y &= -\frac{1}{4}x + 3 \\ y &= -\frac{1}{4}x + 6 \end{aligned}$$

$$20) \left(\frac{2u^4v^4 \cdot 2uv^{-4}}{2u^4v^{-3}} \right)^{-2}$$

$$22) \frac{y^4 \cdot x^3y^{-4}}{(x^3y^4)^4}$$

Answers to Algebra Refresher

1) $\left\{\frac{10}{7}\right\}$

2) $\{15\}$

3) $\left\{\frac{30}{17}\right\}$

4) $\left\{-\frac{9}{7}\right\}$

5) $\{4 + \sqrt{14}, 4 - \sqrt{14}\}$

6) $\{2, -4\}$

7) $\{3 + 2\sqrt{7}, 3 - 2\sqrt{7}\}$

8) $\frac{7}{25}$

9) $\frac{4}{5}$

10) $\frac{4}{5}$

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

12) 39°

13) 60°

14) 62°

15) $(-1, -3)$

16) $(8, 6)$

17) $(6, 7)$

18) No solution

19) $\frac{4}{x^{14}y^5}$

20) $\frac{1}{4v^6u^2}$

21) $\frac{1}{16b^{16}a^{24}}$

22) $\frac{1}{x^9y^{16}}$