1.1

Factorise

$x^2 + 5x + 6$

Simplify

$\sqrt{72}$

Sketch

$y = 2x - 3$

Solve

$6p + 3 = 23$

Rationalise

$$\frac{2}{\sqrt{5}}$$

Make x the subject of the formula

$y = 4x + 3$

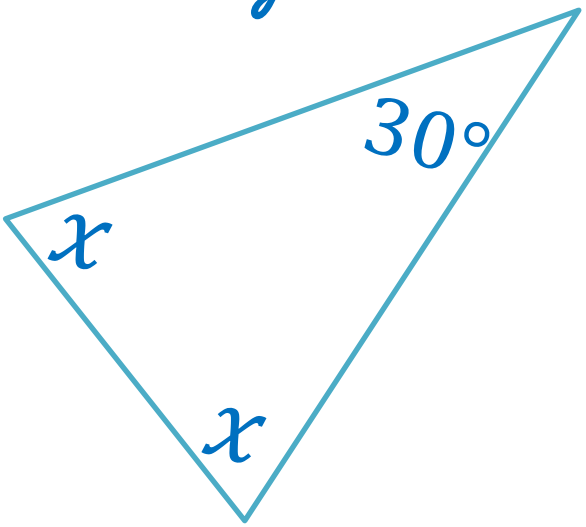
Simplify

$x^7 \times x^5$

FRACTIONS

$$\frac{2}{3} \times \frac{5}{9}$$

Find the angles marked x



Find the gradient and y intercept of the line

$2y = 8x - 4$

1.2

Factorise

$x^2 - 3x - 4$

Simplify

$\sqrt{147}$

Sketch

$y = 2 - 4x$

Solve

$4y - 9 = 3 + y$

Rationalise

$$\frac{1}{\sqrt{3}}$$

Make m the subject of the formula

$p - 7 = 3 + 2m$

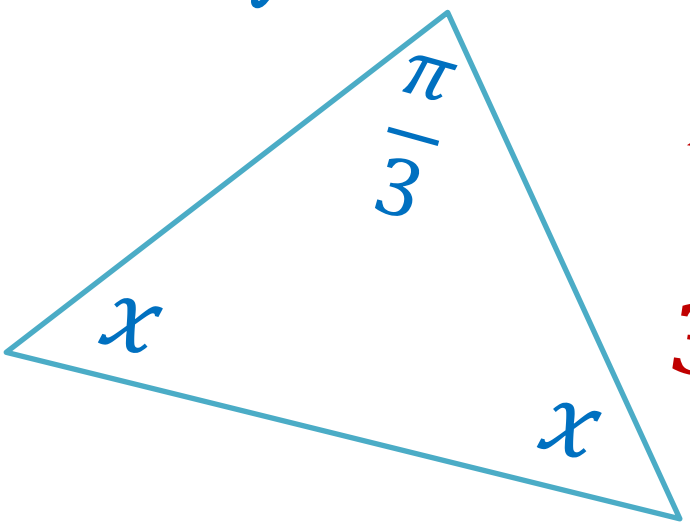
Simplify

$x^8 \div x^2$

FRACTIONS

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

Find the angles marked x



Find the gradient and y intercept of the line

$3y = 6 + 4x$

1.3

Factorise

$x^2 - 4$

Simplify

$\sqrt{45} + \sqrt{18}$

Sketch

$2x + y = 4$

Solve

$3 = \frac{2x + 1}{4}$

Rationalise

$\frac{2}{1 + \sqrt{5}}$

Make y the subject of the formula

$E = 3 - 4y$

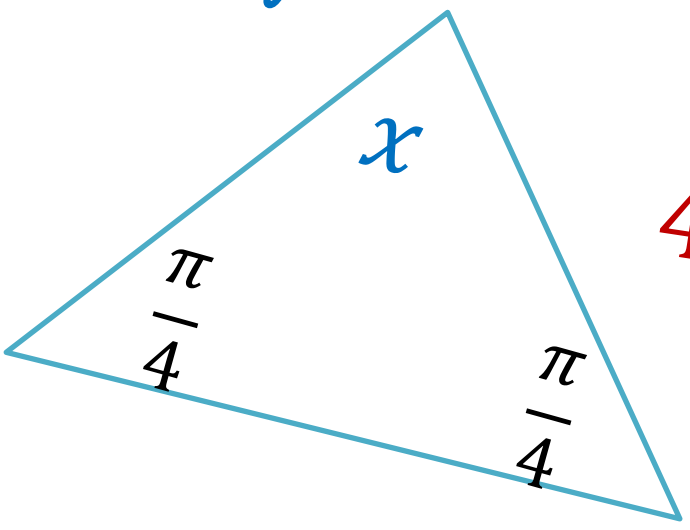
Evaluate

$36^{\frac{1}{2}}$

FRACTIONS

$\frac{3}{4} + \frac{2}{5}$

Find the angle marked x



Find where the line

$4x + 5y = 20$

crosses the x-axis

1.4

Factorise

$$x^2 - 5x + 6$$

Simplify

$$\sqrt{150} - \sqrt{50}$$

Sketch

$$y = x^2$$

Solve

$$\frac{x}{4} + 5 = 6$$

Rationalise

$$\frac{5}{11 + \sqrt{5}}$$

Make p the subject of the formula

$$W = \frac{3y}{2}(p + 5)$$

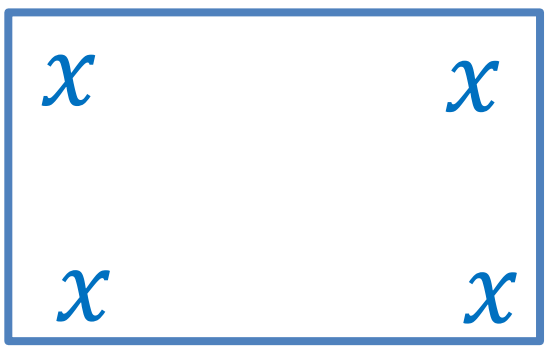
Simplify

$$x^{\frac{1}{2}} \times x^2$$

FRACTIONS

$$\frac{2}{5} \div \frac{3}{4}$$

Find the angles marked x



Find where the line

$$2x - 3y = 12$$

crosses the y-axis

1.5

Factorise

$x^2 - 8x + 15$

Simplify $\frac{\sqrt{21}}{\sqrt{3}}$

Sketch

$y = x^3$

Solve

$2\left(\frac{m}{4} - 4\right) = 16$

Rationalise

$$\frac{3}{5 - \sqrt{3}}$$

Make r the subject of the formula

$$V = \frac{1}{3}\pi r^2 h$$

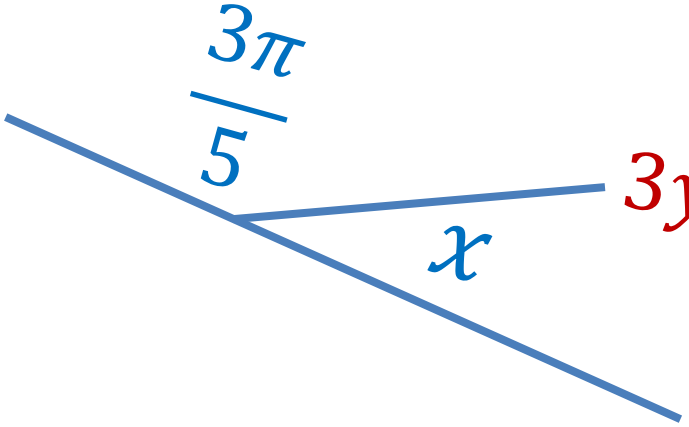
Simplify

$$x^{\frac{3}{2}} \div x^3$$

FRACTIONS

$$1\frac{1}{2} + \frac{3}{4}$$

Find the angle marked x



Find where the line $3y = 2x - 4$ crosses the coordinate axes

1.6

Factorise

$4x^2 - 5$

Simplify $\dfrac{24\sqrt{6}}{4\sqrt{2}}$

Sketch $y = \dfrac{1}{x}$

Solve

$$\frac{1}{4k} + \frac{1}{3k} = -7$$

Rationalise

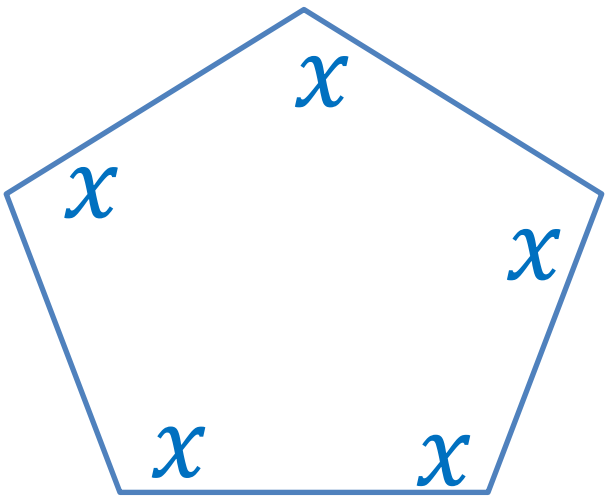
$$\frac{p}{\sqrt{q}}$$

Make k the subject of the formula

$$p = \frac{2k + 4}{k} ?$$

Simplify $\dfrac{x^2}{x^{\frac{1}{3}}} \times x^3$

Find the angles marked x



FRACTIONS

$$\frac{3}{4} \div 2$$

Find where the line $3x + 4y = 5$ crosses the coordinate axes

1.7

Factorise

$$2x^2 - 9x - 5$$

Simplify

$$(3\sqrt{7})^2$$

Sketch

$$y = x^2 + 2$$

Solve

$$\frac{10 - 4x}{6} + \frac{12 + 6x}{2} = 12$$

Rationalise

$$\frac{a}{a + \sqrt{b}}$$

Make y the subject of the formula

$$xy - 5z = 3 - 4y$$

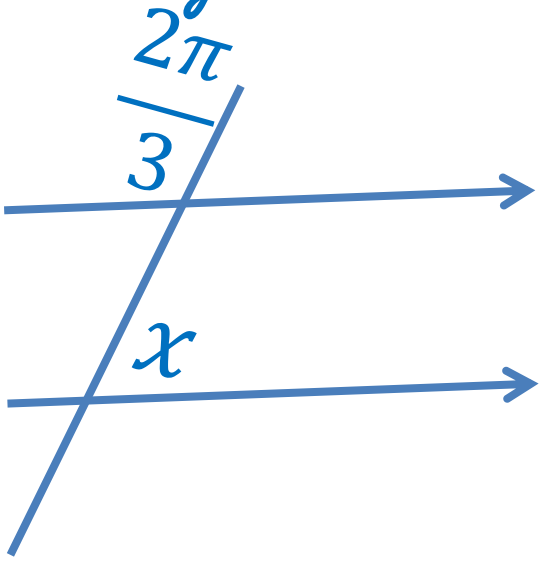
Simplify

$$x^{\frac{1}{2}} \div \frac{1}{x}$$

FRACTIONS

$$2 \times \frac{3}{2}$$

Find the angle marked x



Find where the line $ay = bx + c$ crosses the coordinate axes