

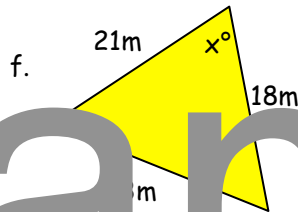
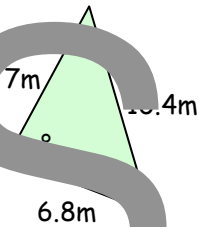
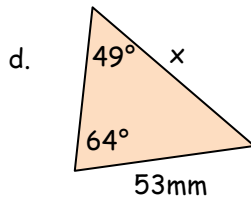
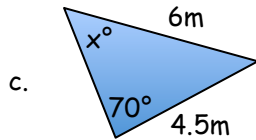
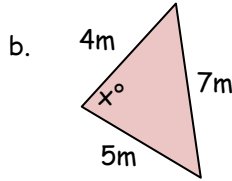
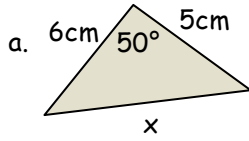
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Sample

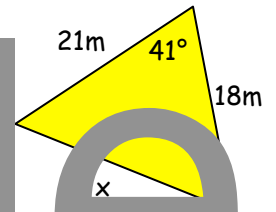
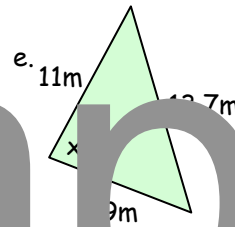
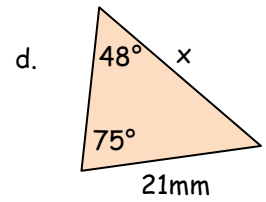
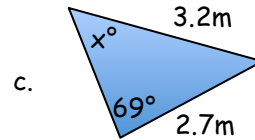
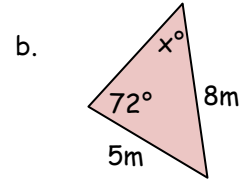
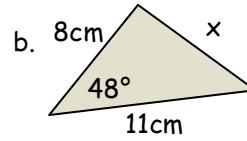
Exercise 1

1. Use the sine rule or cosine rule to find x



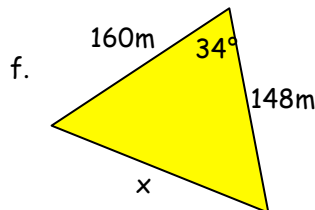
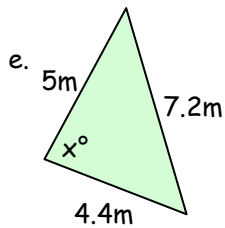
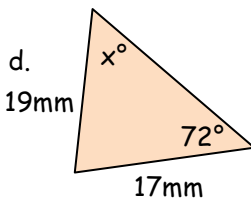
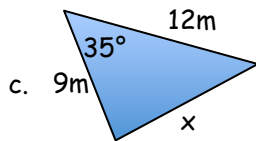
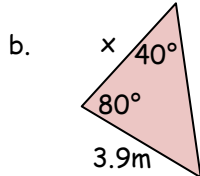
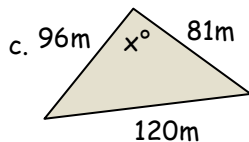
Exercise 2

1. Use the sine rule or cosine rule to find x



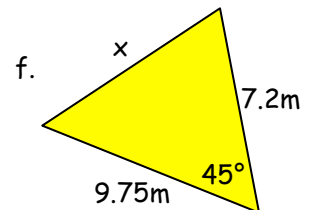
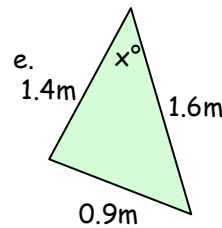
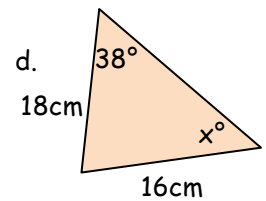
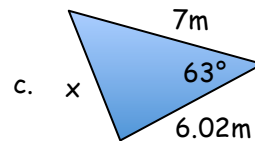
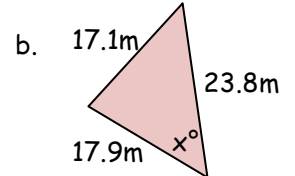
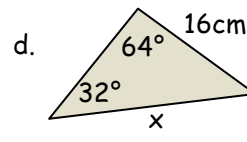
Exercise 3

1. Use the sine rule or cosine rule to find x



Exercise 4

1. Use the sine rule or cosine rule to find x



Applications

Triangle Trigonometry

Exercise 1

3. Add or subtract the following fractions:

a. $\frac{1}{5} + \frac{2}{5}$ b. $\frac{1}{2} + \frac{1}{3}$ c. $2\frac{1}{3} + 3\frac{2}{5}$

d. $8\frac{7}{8} - 5\frac{1}{4}$ e. $6\frac{1}{5} - 2\frac{2}{3}$ f. $\frac{13}{4} + 5\frac{1}{3}$

4. A bodybuilder weighed $14\frac{3}{4}$ stones. After training, his weight increased by $2\frac{1}{3}$ stones. Find his new weight.

5. The length of a pipe was $6\frac{4}{5}$ metres long. $1\frac{1}{5}$ metres was cut from the length. Find the new length of the pipe.

Exercise 2

1. Add or subtract the following fractions:

a. $\frac{2}{7} + \frac{3}{7}$ b. $\frac{2}{3} + \frac{1}{8}$ c. $7\frac{1}{6} + 4\frac{1}{5}$

d. $4\frac{8}{9} - 1\frac{1}{2}$ e. $9\frac{1}{4} - 2\frac{5}{6}$ f. $\frac{12}{5} + 2\frac{1}{4}$

2. A bodybuilder weighed $16\frac{1}{3}$ stones. After training, his weight increased by $2\frac{1}{4}$ stones. Find his new weight.

3. The length of a pipe was $6\frac{6}{7}$ metres long. $1\frac{1}{2}$ metres was cut from the length. Find the new length of the pipe.

Exercise 3

1. Add or subtract the following fractions:

a. $\frac{2}{9} + \frac{3}{9}$ b. $\frac{1}{7} + \frac{1}{8}$ c. $3\frac{1}{2} + 5\frac{2}{5}$

d. $5\frac{7}{12} - 2\frac{1}{4}$ e. $7\frac{1}{2} - 3\frac{3}{5}$ f. $\frac{10}{3} + 4\frac{1}{4}$

2. A bodybuilder weighed $15\frac{2}{5}$ stones. After training, his weight increased by $1\frac{1}{3}$ stones. Find his new weight.

3. The length of a pipe was $6\frac{4}{5}$ metres long. $1\frac{1}{2}$ metres was cut from the length. Find the new length of the pipe.

Exercise 4

1. Add or subtract the following fractions:

a. $\frac{3}{11} + \frac{6}{11}$ b. $\frac{1}{7} + \frac{1}{2}$ c. $5\frac{1}{2} + 6\frac{2}{9}$

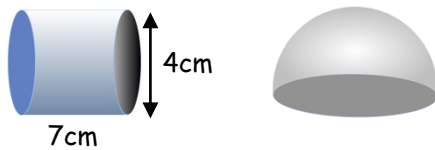
d. $5\frac{6}{7} - 2\frac{3}{14}$ e. $8\frac{1}{3} - 3\frac{4}{5}$ f. $\frac{11}{2} + 2\frac{3}{4}$

2. A bodybuilder weighed $16\frac{1}{4}$ stones. After training, his weight increased by $1\frac{3}{8}$ stones. Find his new weight.

3. The length of a pipe was $8\frac{5}{12}$ metres long. $3\frac{1}{4}$ metres was cut from the length. Find the new length of the pipe.

Exercise 1

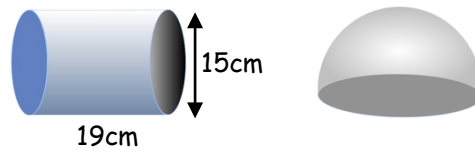
- Find the gradient of line passing through the points (6, 18) and (10, 19).
- Simplify: (a) $\frac{4x^2 - 16}{x^2 - 4x - 12}$ (b) $\frac{4}{x^2} + \frac{2}{x-1}$
- The two shapes have the same volume when rounded to 2 significant figures. Find the radius of the hemisphere



- (a) Simplify: $\frac{(x^4)^5}{18}$
(b) Hence evaluate when $x = 2$
- Find the radius of the sector. Area of sector = 55cm², angle = 70°

Exercise 2

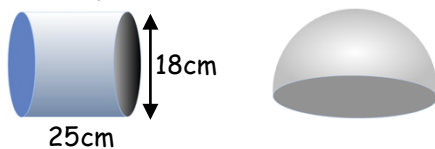
- Find the gradient of line passing through the points (1, -3) and (12, 23).
- Simplify: (a) $\frac{5x^2 - 125}{x^2 - 3x - 10}$ (b) $\frac{6}{x} + \frac{7}{x+2}$
- The two shapes have the same volume when rounded to 2 significant figures. Find the radius of the hemisphere



- (a) Simplify: $\frac{x^4 \times (x^3)^{\frac{1}{6}}}{x^3}$
(b) Hence evaluate when $x = 2$
- Find the radius of the sector. Length of arc = 18cm, angle = 5°

Exercise 3

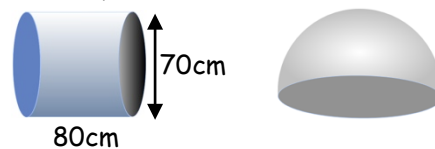
- Find the gradient of line passing through the points (10, 12) and (-2, 9).
- Simplify: (a) $\frac{3x^2 - 3x - 18}{3x^2 - 27}$ (b) $\frac{2x}{x-2} - \frac{5}{x+2}$
- The two shapes have the same volume when rounded to 2 significant figures. Find the radius of the hemisphere



- (a) Simplify: $(x^6)^2 \times x^{\frac{5}{3}}$
(b) Hence evaluate when $x = 25$
- Find the radius of the sector. Area of sector = 15cm², angle = 150°

Exercise 4

- Find the gradient of line passing through the points (-17, 16) and (-3, 9).
- Simplify: (a) $\frac{8x^2 - 32}{5x^2 - 20}$ (b) $\frac{3x}{x-3} - \frac{4}{-x^2}$
- The two shapes have the same volume when rounded to 2 significant figures. Find the radius of the hemisphere



- (a) Simplify: $(x^2)^6 \times x^{\frac{4}{3}}$
(b) Hence evaluate when $x = 2$
- Find the radius of the sector. Length of arc = 56cm, angle = 100°