Warm up:

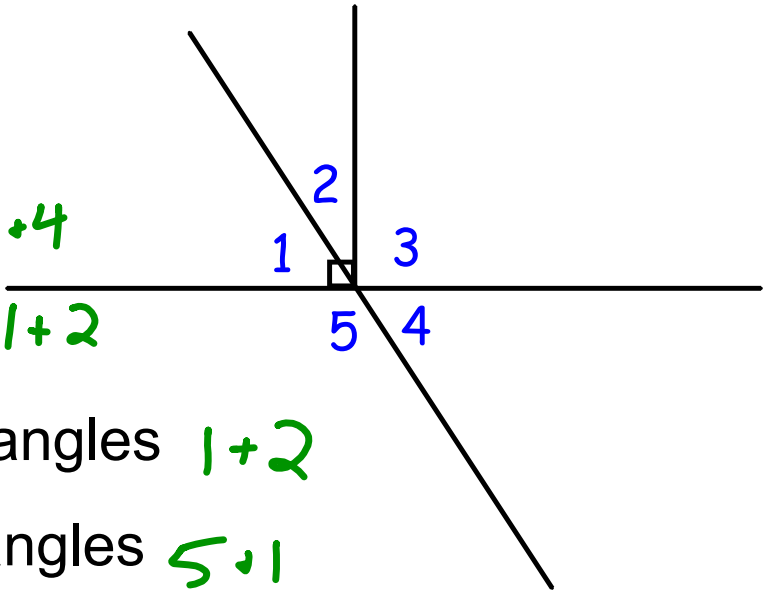
Give examples of the following.

1) vertical angles 1 and 4

2) adjacent angles 1 and 2

3) complementary angles 1 and 2

4) supplementary angles 5 and 1



HW Solutions

1) $\frac{2}{5} \times \frac{6}{x}$ $\quad$ $\frac{2}{5} \times \frac{9}{x}$

$\frac{2x}{2} = \frac{30}{2}$ $\quad$ $\frac{2x}{2} = \frac{45}{2}$

$x = 15\text{m}$ $\quad$ $x = 22.5\text{m}$

$15 \cdot 22.5 = 337.5\text{m}^2$

② $\frac{1}{3} = \frac{16}{x}$

$x = 48$

48m

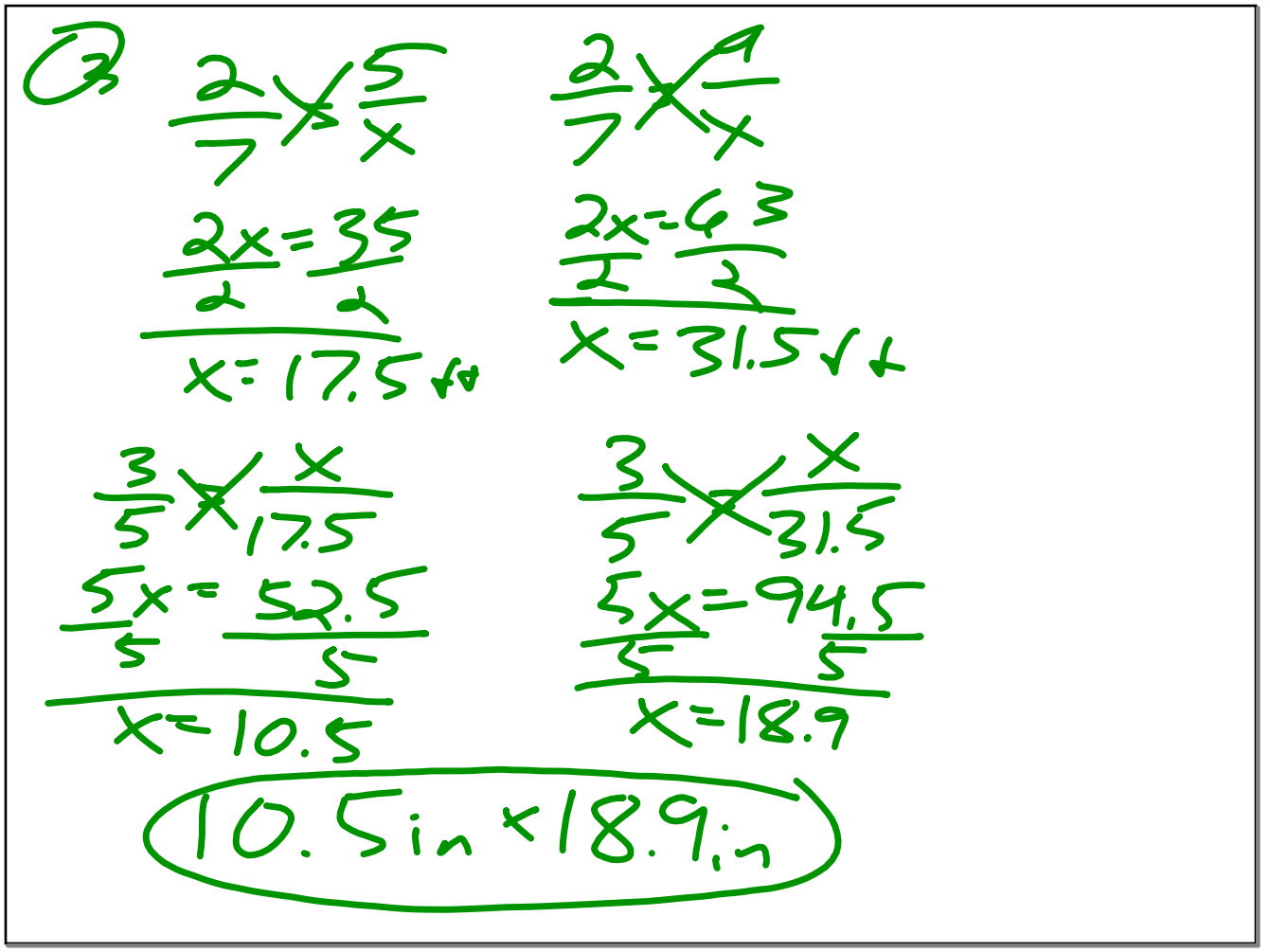
$\frac{2}{4.5} = \frac{x}{48}$

$4.5x = 96$

$\frac{4.5}{4.5} \quad \frac{4.5}{4.5}$

$x = 21.333\overline{3}$

$\approx 21.33\text{cm}$


3
2/7 = 5/x
2x = 35
x = 17.5 ft
2/7 = 6/x
2x = 63
x = 31.5 ft
3/5 = x/17.5
5x = 52.5
x = 10.5
3/5 = x/31.5
5x = 94.5
x = 18.9
10.5 in x 18.9 in

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Showdown

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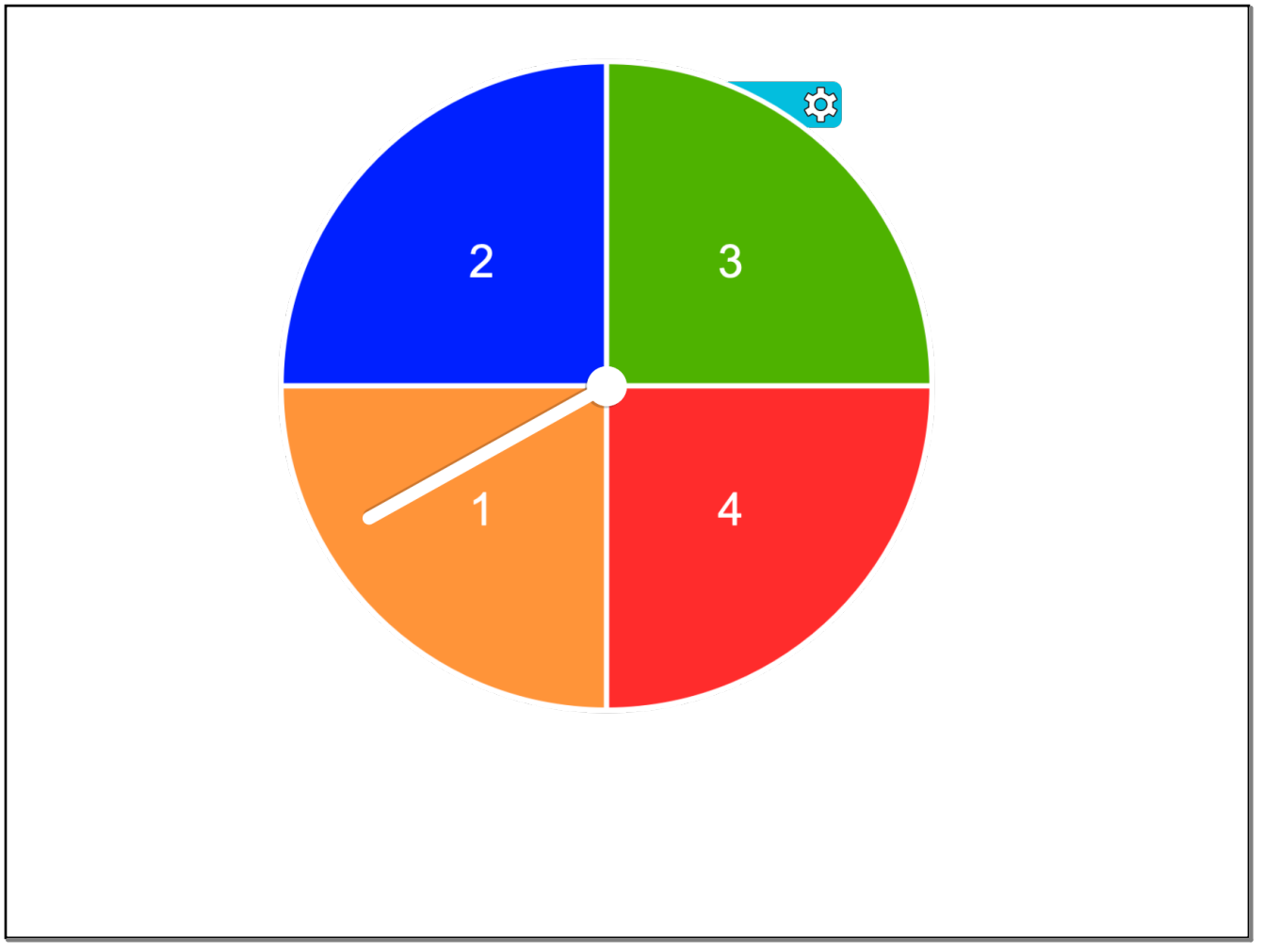
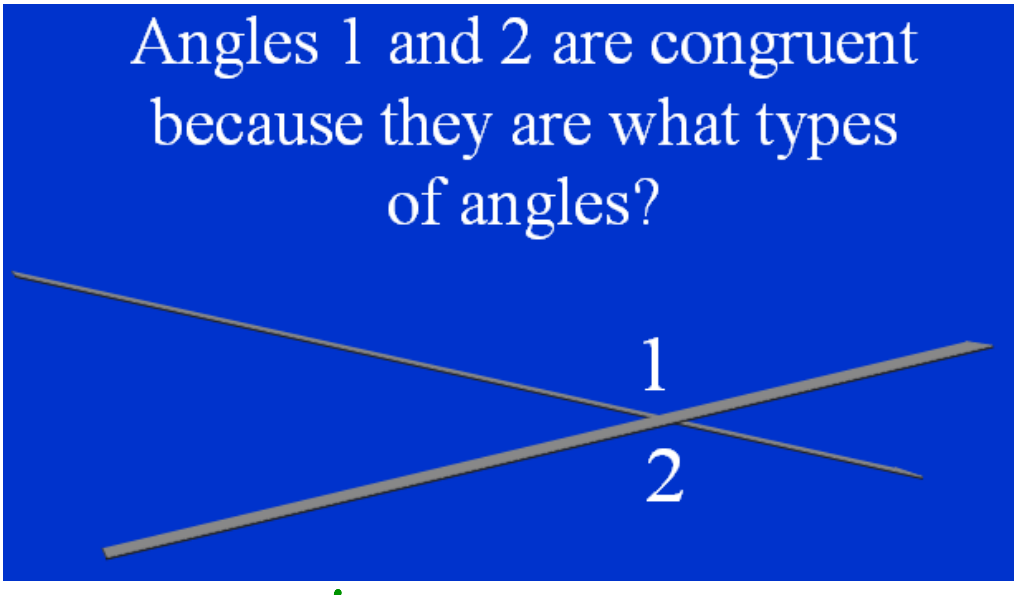


Two angles are complementary if the sum of their measures is equal to what?

90°

A pair of angles whose sum is 180° are referred to as what types of angles?

supplementary


Angles 1 and 2 are congruent because they are what types of angles?
1
2

Vertical

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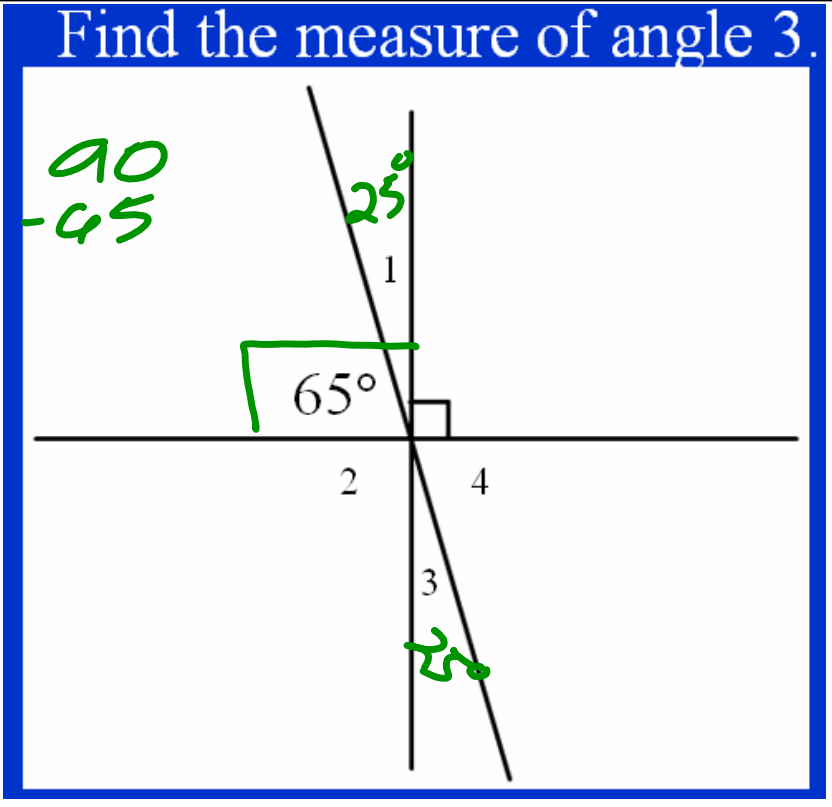
Find the measure of angle 3.



How many triangles can you make with the given information?

side lengths 8ft, 2ft, 7ft

$7+2>8$

$9>8$

(1)

You have a model boat that is $2\frac{3}{8}$ in long. If the scale is 1in = 13ft, how long is the actual boat?

$\frac{1}{13} = \frac{2\frac{3}{8}}{x}$

$x = 30\frac{7}{8}$ ft

$8\overline{)247}$ → 30, -24, 07

$13 \cdot 2\frac{3}{8}$

$\frac{13}{1} \cdot \frac{19}{8}$

$\frac{247}{8}$

$\begin{array}{r} 13 \\ \times\ 19 \\ \hline 247 \end{array}$

How many triangles can you make with the given information?

angle measures 80°, 20°, 80°

$80 + 20 + 80 = 180$

infinitely many

Jane made a model airplane that is 14cm long. If it was made with a scale of 4cm:5m, what is the actual length of the airplane?

$$\frac{4}{5} = \frac{14}{x}$$

$$\frac{4x}{4} = \frac{70}{4}$$

$$x = 17.5$$

17.5m

On a map, a rectangular park is 2in wide and 7in long. If the map was made with a scale of 5in = 9ft, what is the area of the park?

$\frac{5}{9} \times \frac{2}{x}$ $\quad$ $\frac{5}{9} \times \frac{7}{x}$

$\frac{5x}{5} = \frac{18}{5}$ $\quad$ $\frac{5x}{5} = \frac{63}{5}$

$x = 3.6\text{ft}$ $\quad$ $x = 12.6\text{ft}$

$3.6 \times 12.6 = 45.36\text{ft}^2$

Angles with a common vertex and common side are called _____ angles.

How many triangles can you make with the given information?

angle measures 30^{o}, 40^{o}, 50^{o}

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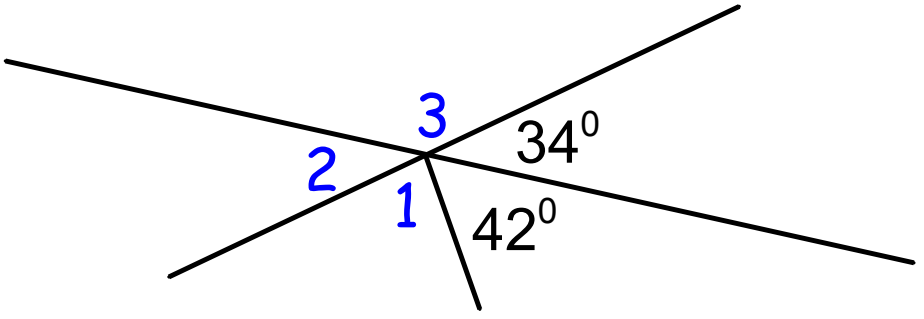
Find the measure of angle 1.



Two landmarks are 7cm apart on a map. The map was made with a scale of 4cm = 25m. If you were to make a new map with a scale of 2cm = 20m, how far apart would the landmarks be on the new map?

A model train set is 42.3cm long. If the scale is 1cm = 40m, how long would the actual train be?

How many triangles can you make with the given information?

side lengths 14m, 5m, 7m

How many triangles can you make with the given information?

side lengths 5in, 5in, 10in

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