

# Similar Triangles and Trigonometry: your summary

Name \_\_\_\_\_

Date \_\_\_\_\_

vertexmath.ca  
Worksheet, answers &  
this cheat sheet



**1** Fill in every blank from memory. No notes.

**2** Check it against the Unit Summary in a different colour.

**3** Tick ✓ or X on each card. Every X is a topic to review.

## Which tool?

Write the tool for each case.

Tree and post shadows

Legs 5 and 12

32° and 10 m

### 1 Congruent or similar? ☒ ☒

**1** Are triangles with sides 10, 14, 16 and 15, 21, 24 similar? Congruent?

### 2 Scale factor ☒ ☒

**2**  $\triangle PQR \sim \triangle XYZ$ ,  $PQ = 6$ ,  $XY = 15$ ,  $QR = 4$ , and  $\triangle PQR$  has area 10. Find  $YZ$  and the area of  $\triangle XYZ$ .

### 3 Proportions and shadows ☒ ☒

**3** A 2 m post casts a 3.5 m shadow. At the same time a building casts a 28 m shadow. How tall is the building?

### 4 SOH CAH TOA ☒ ☒

**4** A right triangle has legs 7 and 24. Find  $\sin$ ,  $\cos$  and  $\tan$  of the angle opposite the side 7.

### 5 Solving a right triangle ☒ ☒

**5**  $\tan \theta = 17/8$ . Find  $\theta$ .

**6** Hypotenuse 26, one angle 35°. Find the side opposite 35°.

### 6 Elevation and depression ☒ ☒

**7** A 65 m kite string makes an angle of elevation of 48°. How high is the kite?

## My traps Your three most likely mistakes, and how you will catch each one.

**1** \_\_\_\_\_ **2** \_\_\_\_\_ **3** \_\_\_\_\_

Answers · Answers to the numbered prompts. Cover this strip until you are done.

**1** Similar (every ratio is 1.5), not congruent  
**2**  $k = 2.5$ ;  $YZ = 10$ , area 62.5  
**3** 16 m  
**4**  $7/25$ ,  $24/25$ ,  $7/24$   
**5**  $\theta \approx 64.8^\circ$   
**6**  $26 \sin 35^\circ \approx 14.9$   
**7**  $65 \sin 48^\circ \approx 48.3$  m